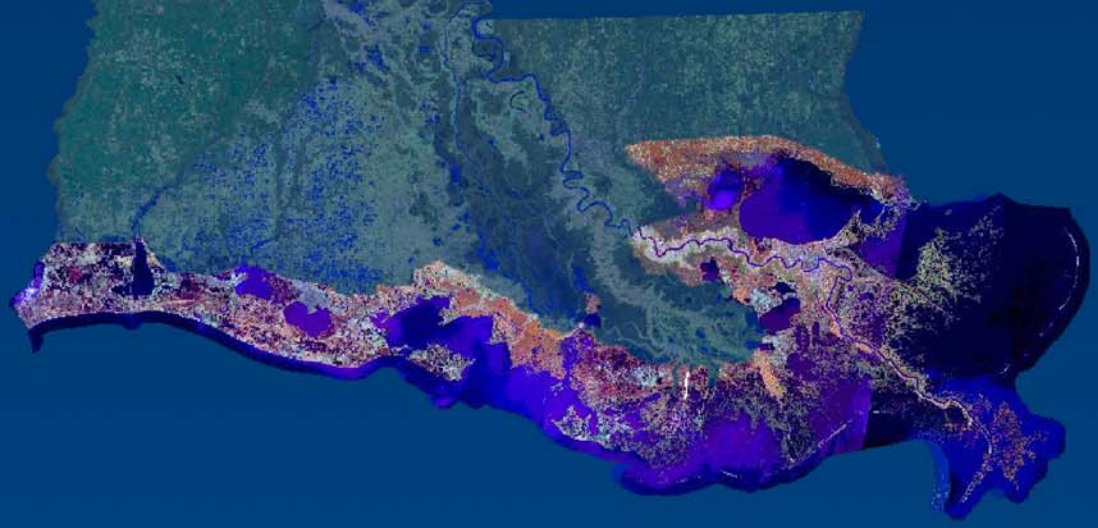
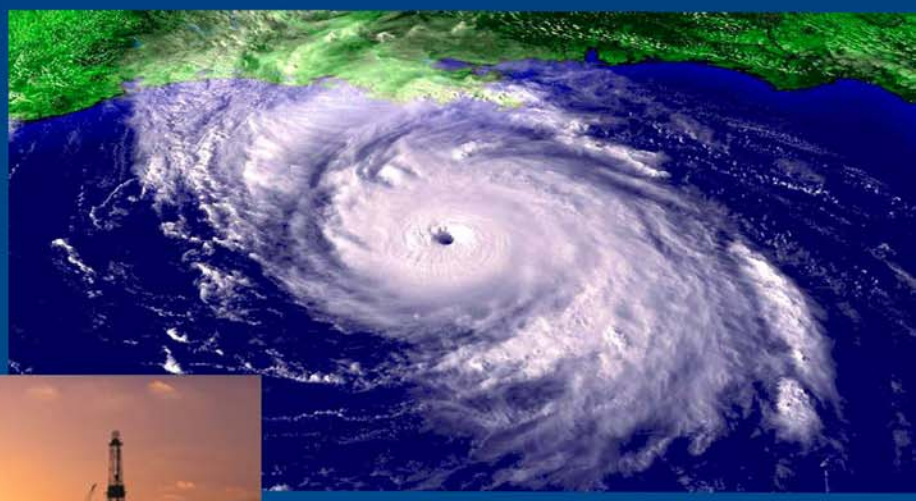
Coastal Restoration Annual Project Reviews

December 2004





Turning Back The Tide On A Vanishing American Treasure

STATE OF LOUISIANA
Kathleen Babineaux Blanco, Governor

DEPARTMENT OF NATURAL RESOURCES
Scott A. Angelle, Secretary

OFFICE OF COASTAL RESTORATION AND MANAGEMENT
Gerald M. Duszynski, Acting Assistant Secretary

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The purpose of this document is to provide interested parties with easily accessible information about projects constructed to date and the current efforts to address Louisiana's coastal land loss problem. The information contained in this report is current through November 2004. For more detailed information on these projects, or other relevant efforts visit our website at www.dnr.louisiana.gov/crm call 1-888-459-6107, or write to the Department of Natural Resources, Coastal Restoration Division, P.O. Box 44027, Capitol Station, Baton Rouge, Louisiana 70804-4027.

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ABBREVIATIONS

BBWW	Barataria Bay Waterway
CED	Coastal Engineering Division
CFS	Cubic Feet Per Second
CIAP	Coastal Impact Assistance Program
CRD	Coastal Restoration Division
CWPPRA	Coastal Wetlands Planning, Protection and Restoration Act
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Administration
GIS	Geographic Information System
GIWW	Gulf Intracoastal Waterway
LCA	Louisiana Coastal Area
LDAF	Louisiana Department of Agriculture and Forestry
LDNR	Louisiana Department of Natural Resources
LDWF	Louisiana Department of Wildlife and Fisheries
LSU	Louisiana State University
MRGO	Mississippi River Gulf Outlet
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWRC	National Wetlands Research Center
OCRM	Office of Coastal Restoration and Management
OCS	Outer Continental Shelf
PCWRP	Parish Coastal Wetlands Restoration Program
PPL	Priority Project List
SONRIS	Strategic Online Natural Resources Information System
SSPM	Mississippi River Small-Scale Physical Model
SWCC	Soil and Water Conservation Committee
SWCD	Soil and Water Conservation Districts
TPCG	Terrebonne Parish Consolidated Government
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WRDA	Water Resources Development Act

AN INTRODUCTION TO COASTAL RESTORATION IN LOUISIANA

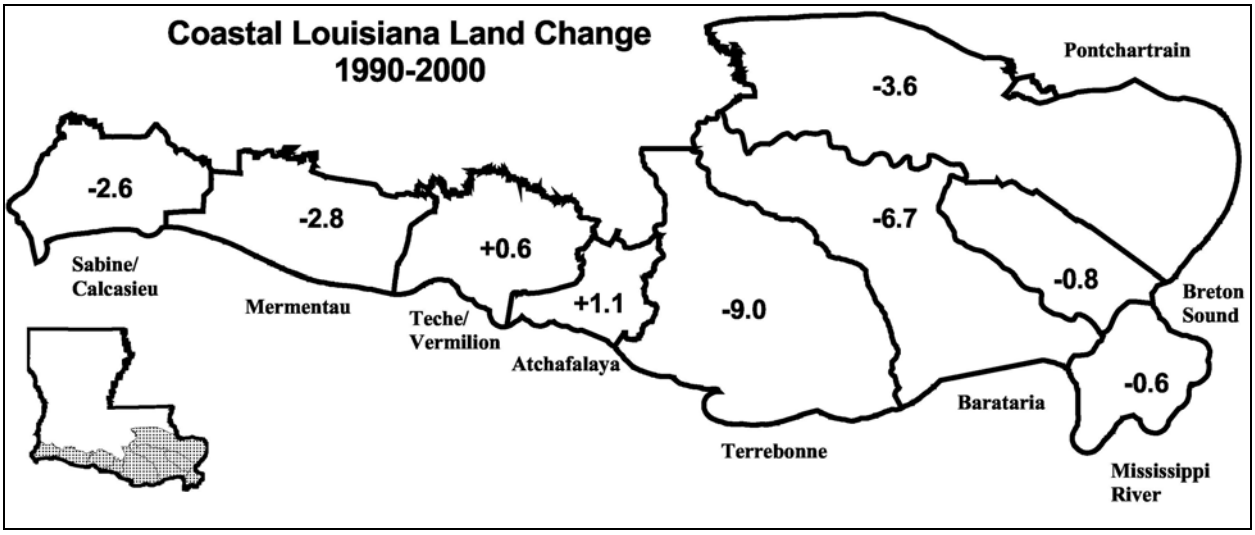


Figure 1. Coastal Louisiana land change (square miles/year) by hydrologic basin from 1990-2000 (Barras et al. 2003[1]).

OVERVIEW

Since the 1930s Louisiana has lost over 1,900 square miles of land. Between 1990 and 2000 wetland loss was approximately 24 square miles per year (Figures 1 and 2). At this rate, an area the size of a football field is lost every 38 minutes. Currently Louisiana has 30% of the total coastal marsh and accounts for 90% of the coastal marsh loss in the lower 48 states.

The causes of wetland loss are complex and vary across the state. They can be attributed to both natural processes (e.g., subsidence and storm events) and human activities (e.g., levee and canal construction). Wetlands, not only provide recreation (e.g., sport fishing and hunting, photography, and bird watching), but also ecological benefits such as hurricane protection, water quality improvement, flood peak reduction, and resource production. If this trend of wetland loss in Louisiana continues, it puts vital infrastructure valued at $90-100 billion at risk.

The State of Louisiana has initiated a series of programs to offset the catastrophic loss of coastal wetlands. The Louisiana State and Local Coastal Resources Management Act was passed in 1978 to regulate the developmental activities that affect wetland loss. The resulting Louisiana Coastal Resources Program became a federally approved coastal zone management program in 1980. Responding to the crisis at hand, the Louisiana Legislature passed Act 6 of the second extraordinary session of 1989 (R.S. 49:213-214), and a subsequent constitutional amendment which created the Coastal Restoration Division (CRD) within the Louisiana Department of Natural Resources (LDNR), as well as the Wetlands Conservation and Restoration Authority (Wetlands Authority). Act 6 also established the Wetlands Trust Fund, which provides revenues derived from oil and gas activities to wetland restoration efforts in Louisiana.

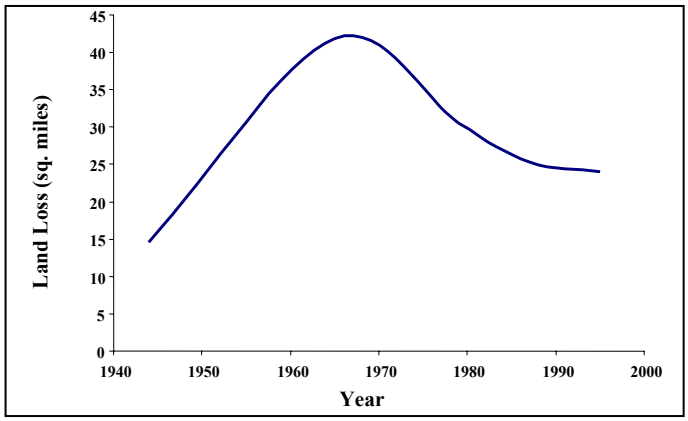


Figure 2. Land loss rate in Louisiana coastal plain (Dunbar et al. 1992[1] and Barras et al. 2003[2]).

In August 2003, the Coastal Restoration Division went through an administrative reorganization and was subsequently divided into the Coastal Restoration Division and the Coastal Engineering Division (CED). The CRD is comprised of the Restoration Technology Section, the Land Section, the Planning Section, and the Biological Monitoring Section. The CED is comprised of the Project Management Section, the Engineering and Design Section, and the Field Engineering Section.

RESTORATION PROGRAMS

Breaux Act

In 1990, the United States Congress recognized the national significance of wetland loss in Louisiana and passed the Coastal Wetlands Planning, Protection and Restoration Act (hereinafter, the "Breaux Act"; Public Law 101-646, Title III) to contribute federal monies to state restoration activities. In 2004, the United States Congress voted to extend the Breaux Act program for an additional 15 years, under the Consolidated Appropriations Act, 2005. Since passage, the Breaux Act has dedicated approximately $40 million annually to wetland restoration projects in Louisiana. The Breaux Act also created a partnership between Louisiana and five federal agencies: the United States Departments of the Army, Agriculture, Commerce, and the Interior; and the United States Environmental Protection Agency. Since 1991, the State of Louisiana and its cooperating federal partners have been formally selecting restoration projects on an annual basis for implementation. The CRD's Biological Monitoring Section cooperates with federal, state, and local agencies to evaluate all restoration projects prior to, and following, project construction through the use of the Coastwide Reference Monitoring System (CRMS)-Wetlands program. CRMS provides an unbiased, scientific approach to assessing the effectiveness of each project and the collective effects of projects at the hydrologic basin and ecosystem scale. Breaux Act projects are typically monitored over the entire 20-year project life.

Other Restoration Programs

Several other wetland restoration programs have been implemented, each utilizing a specific strategy to combat coastal wetland loss, including: the Parish Coastal Wetlands Restoration Program (PCWRP), the Coastal Impact Assistance Program (CIAP) governed by Section 903 of the Commerce, State, Justice FY2001 Appropriations Act, the LDNR/Natural Resources Conservation Service (NRCS)/Soil and Water Conservation Committee (SWCC) Vegetation Planting Program, and the beneficial use of dredged material program governed by Sections 204 and 1135 of the Water Resources Development Act (WRDA).

[1] Dunbar, J.B., L.D. Britsch and E.B. Kemp, III. 1992. Land loss rates: report 3, Louisiana coastal plain. Technical Report GL-90-2, U.S. Army Corps of Engineers District, New Orleans, La. 28 pp.

[2] Barras, J. A., S. Beville, D. Britsch, S. Hartley, S. Hawes, J. Johnston, P. Kemp, Q. Kinler, A. Martucci, J. Porthouse, D. Reed, K. Roy, S. Sapkota, and J. Suhayda. 2003. Historical and projected coastal Louisiana land changes: 1978-2050: USGS Open File Report 03-334.

The PCWRP, also known as the "Christmas Tree Program," is designed to encourage public involvement and participation in coastal restoration. Wooden enclosures are filled with recycled Christmas trees that have been donated by the public. These structures are built in close proximity to the shoreline and absorb wave energy, protecting existing marsh vegetation. Sediment is deposited behind these structures and promotes subsequent colonization and growth of new marsh vegetation. Christmas tree fences are relatively inexpensive, with an average cost of $50 per linear foot.

The Coastal Impact Assistance Program (CIAP) was authorized to assist states in mitigating the impacts from Outer Continental Shelf (OCS) oil and gas production. The CIAP recognizes that offshore oil and gas activities impact coastal states and localities nearest to where the activities occur, and where the related facilities are located. The CIAP legislation appropriated money to coastal states and coastal political subdivisions and requires that each state submit a Coastal Impact Assistance Plan which describes how these funds will be expended. Louisiana is one of seven coastal states selected to receive funds under this appropriation to implement this program. The one-year allocation in 2001 to Louisiana totaled $26.4 million. These funds are to be expended according to the legislation and guidelines developed by the National Oceanic and Atmospheric Administration (NOAA).

The Louisiana Department of Natural Resources (LDNR), the Natural Resources Conservation Service (NRCS), the Soil and Water Conservation Committee (SWCC) Vegetative Planting Program is a unique, three agency partnership through which native marsh vegetation is planted and monitored throughout the coastal zone of Louisiana. LDNR enters into annual cooperative agreements with the Louisiana Department of Agriculture and Forestry (LDAF). It is through the LDAF and the SWCC's Soil and Water Conservation Districts (SWCD) that the planting tasks are selected, planned, evaluated, planted, and monitored. Each NRCS District Conservationist provides technical assistance to their respective SWCD throughout the planting task process.

Projects funded under Sections 204 and 1135 originated from operation and maintenance of existing U.S. Army Corps of Engineers dredging projects for navigable waterways. Through cooperation between the state and federal governments, the material dredged during regularly scheduled maintenance is utilized for the creation of wetlands, improvement of wetland habitat, or the protection of eroding shorelines.

Through WRDA, the United States Congress authorized the United States Army Corps of Engineers (USACE) to construct large-scale freshwater diversion projects along the Mississippi River. These river diversions have the potential to benefit vast areas of deteriorating marsh by introducing beneficial freshwater, sediment, and nutrients. It is anticipated that the Caernarvon and Davis Pond Freshwater Diversions near New Orleans will benefit over 51,200 acres of wetland habitat.

COAST 2050

In 1997, a significant planning effort called "Coast 2050" was initiated to combine all elements of Louisiana's previous coastal restoration efforts, as well as new initiatives. This new approach included input from private citizens, local governments, state and federal agency personnel, and the academic community. This comprehensive plan focused all efforts of the participating agencies on the common goal of restoring and protecting the coastal ecosystem in Louisiana. Coast 2050

subdivided the Louisiana coast into four planning regions based on hydrologic basins. In order to reestablish a sustainable, highly productive ecosystem, Coast 2050 identified the following three strategic goals as the essential natural processes required:

Goal 1: Assure vertical accumulation to achieve sustainability;
Goal 2: Maintain estuarine gradient to achieve diversity; and
Goal 3: Maintain exchange and interface to achieve system linkages.

The Louisiana Coastal Wetlands Conservation and Restoration Task Force (Breaux Act Task Force) and the State Wetlands Authority adopted the Coast 2050 effort as their official restoration plan. It has also garnered the support of the 20 parish councils and police juries within the Louisiana coastal zone.

LOUISIANA COASTAL AREA (LCA) ECOSYSTEM RESTORATION PLAN

The Louisiana Coastal Area (LCA) Ecosystem Restoration Plan, based on Coast 2050, is the first step in implementing the long-range, large-scale ecosystem restoration strategies necessary to preserve and protect coastal Louisiana. The LCA study subdivided the Louisiana coast into four sub-provinces similar to the Coast 2050 planning regions. The original goal of this study was to develop a comprehensive plan for implementing the regional ecosystem restoration strategies identified in the Coast 2050 report. However, because of direction received from policy makers in Washington D.C., a near-term plan that defines the first 10 years of the LCA program was developed. This near-term plan is estimated to cost $1.98 billion, and includes: 15 restoration projects, creation of a Science and Technology program, funding for demonstration projects, increased funding for beneficial use of dredged material, and funding for large-scale studies. The 15 projects meet critical ecological and/or societal needs, and may be constructed within the next five to ten years. The State of Louisiana considers this near-term plan to be the first step towards implementation of the Coast 2050 vision. Federal funding for the LCA Ecosystem Restoration Plan is contingent upon submission of the final report to the United States Congress by the end of 2004 and subsequent Congressional authorization of the plan and appropriation of funds.

AMERICA'S WETLAND CAMPAIGN

America's WETLAND
Campaign to Save Coastal Louisiana

In August 2002, a multi-year public education initiative entitled **America's WETLAND: Campaign to Save Coastal Louisiana** was launched. Louisiana's Governor Kathleen B. Blanco has endorsed and participated in several new phases of the America's WETLAND campaign since taking office.

Louisiana Department of Natural Resources Secretary Scott A. Angelle has also had a strong and effective voice in the coastal restoration program since his tenure. He testified before the Louisiana congressional delegation and other members of the Congress as hearings were held for the Energy Bill in Washington D.C. in May 2004, shortly after being named to head the department. The Governor, coastal advisors, and Secretary Angelle later in the year sponsored a coastal flight and briefing for members of Congress and their aides as they visited America's WETLAND. The Secretary continues to push for support and funding of the coastal program placing

emphasis on the significance of Louisiana's vital energy resources to the rest of the nation.

Shell Oil Company and other supporting partners have provided funding for the campaign. The America's WETLAND campaign continues to elevate issues of coastal land loss in the state to national and international status. For updates and a comprehensive look at the campaign, visit the website at www.americaswetland.com.

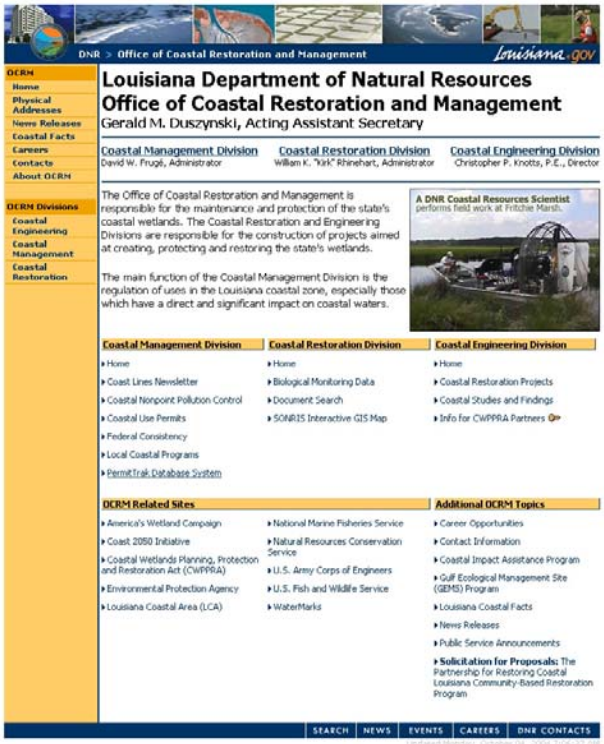
GOVERNOR'S COMMISSION ON COASTAL RESTORATION AND CONSERVATION

Act No. 114 of the Louisiana State Legislature created the Governor's Commission on Coastal Restoration and Conservation during the First Extraordinary Session of 2002. The 31-member commission represents statewide stakeholders. The purpose of the Commission is to advise the Governor and the Executive Assistant for Coastal Activities on the overall status and direction of the state's coastal restoration program, while fostering cooperation on coastal preservation and restoration issues among federal, state, and local governmental agencies, conservation organizations, and the private sector.

RECENT PROGRAM DEVELOPMENTS

Information Management System

Implementation of the coastal restoration program generates an abundance of environmental monitoring data, engineering data, geospatial data, and both project-specific and programmatic reports. In an effort to effectively manage and make available the large amount of data and information generated by the coastal restoration program, a detailed information management system is maintained. It is accessible to the public through the LDNR Office of Coastal Restoration and Management (OCRM) website, located at http://dnr.louisiana.gov/crm. This website has recently been updated and restructured to improve efficiency and to reflect organizational changes within the OCRM.



This website also contains a link to the SONRIS Interactive Geographic Information Systems (GIS) Map. This is a system that combines a detailed GIS database and a coastal restoration project relational database. GIS data that are available on the system include satellite imagery, aerial photography, coastal restoration project boundaries, elevation benchmarks, geotechnical soil borings, and monitoring stations. Users can perform a wide range of custom queries on many of the GIS data layers available to refine and summarize information. Through use of this GIS technology, it is possible to seamlessly link directly to the coastal restoration project

database and download environmental data, geospatial data, and project reports for any coastal restoration project. This innovative approach to environmental data and information dissemination will elevate public awareness and advance the science behind coastal restoration.

Mississippi River Small-Scale Physical Model

The Mississippi River Small-Scale Physical Model (SSPM) was designed to analyze sediment transport patterns and marsh building capabilities of various uncontrolled diversions in the Mississippi River Delta. It is expected that the SSPM will aid coastal engineers and scientists in evaluating the effectiveness of using combinations of large and small freshwater diversions, more efficient sediment management practices, and the consequences to navigation in returning the delta to a more natural state. Brown Cunningham Gannuch, the contracting consultant for the LDNR, organized an interdisciplinary team of recognized experts in river modeling, sediment transport, coastal estuaries, and coastal geology to aid in the design of the model. The model was constructed and verified by SOGREAH of Grenoble, France in June 2003, then shipped to Louisiana where it was subsequently re-assembled and reverified. The SSPM is currently housed at the Vincent A. Forte River and Coastal Engineering Research Laboratory on Louisiana State University's (LSU) Baton Rouge campus.

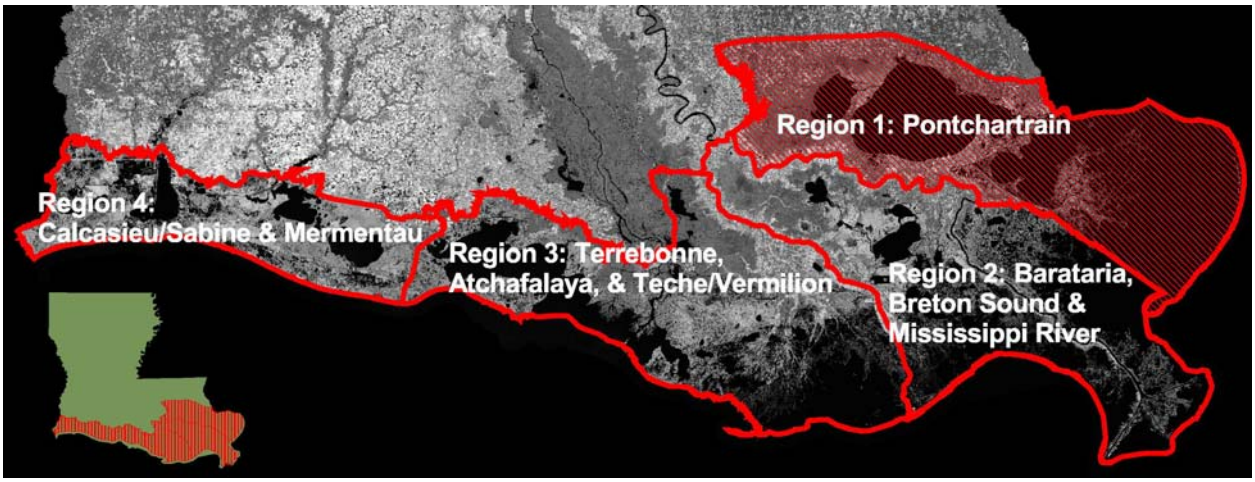
The SSPM represents 3,500 square miles of the Mississippi River delta region and features three large diversions, twelve small diversions, and the Bohemia Spillway/Pointe a la Hache Relief Outlet. The model is built to a horizontal scale of 1:12,000 and a vertical scale of 1:500. As of September 2004, four simulated model diversion tests were conducted by LDNR and LSU. Plans for future studies of the model include time-lapse photography for a more detailed assessment of clay and silt deposition in the region, as well as modeling future diversions and navigation changes in the Mississippi River.

SYNOPSIS

The CRD/CED, its federal partners, and the State Wetlands Authority have implemented projects throughout coastal Louisiana that have been successful at restoring, protecting, and enhancing coastal wetlands. These projects are reducing coastal erosion, improving habitat conditions for coastal fisheries and wildlife species, and building new wetlands.

This report provides information about all coastal restoration projects that either have been completed or are in the planning stages in the four Coast 2050 regions to date. It includes a compilation of information from all federal and state agencies involved in coastal restoration in Louisiana.

REGION 1



INTRODUCTION

Region 1 encompasses the Lake Pontchartrain Basin, extending from the Mississippi River Gulf Outlet (MRGO) on the south to the Prairie Terrace on the north, and from the Chandeleur Islands on the east to the Lake Maurepas swamps and marshes on the west. This region covers all or part of the following parishes: Livingston, Tangipahoa, St. Tammany, St. Bernard, Orleans, Jefferson, St. Charles, St. John the Baptist, St. James, and Ascension.

Region 1 contains 576,570 acres of coastal wetlands consisting of approximately 110,000 acres of bottomland hardwood forest; 213,570 acres of swamp; 34,700 acres of freshwater marshes; 27,700 acres of intermediate marshes; 110,900 acres of brackish marshes; and 79,700 acres of saline marshes.

Estimates of wetland loss from Region 1 indicate that between 1990 and 2000, a total of 23,296 acres of wetlands were lost (an average of 2,304 acres per year). Lakes Pontchartrain, Maurepas, and Borgne are the dominant hydrologic features within this region. Predominantly all of the Amite, Lake Maurepas, and Tickfaw watersheds (a combined area of 3,255 square miles) drain into Lake Maurepas. Lake Pontchartrain, connected to Lake Maurepas by Pass Manchac and North Pass, also receives freshwater inflows from the Tangipahoa and Liberty Bayou-Tchefuncte watersheds (a combined area of 1,471 square miles), as well as the Bonnet Carre´ Spillway. Major navigation channels within the region are the MRGO and the Gulf Intracoastal Waterway (GIWW).

Considerable wetland loss began in Region 1 in the early 1960s after the construction of the MRGO, with marsh loss occurring directly through channel dredging, and indirectly through saltwater intrusion and vessel wakes. Effects of increased salinities were seen as far away as the Pontchartrain/Maurepas Land Bridge. Marshes east of New Orleans and adjacent to the MRGO were severely impacted by levee-induced ponding of water. Other major causes of land loss within this region include shoreline erosion, subsidence, and altered hydrology.

The most critical concerns of parish governments and the public are preserving the present habitats and current levels of productivity. Near the Manchac and North Shore areas and around the Pearl River mouth, conversion of some intermediate and brackish marshes to fresh marshes is needed.

Open water in the interior of the forested wetlands near Lake Maurepas is also recommended for conversion back to forested wetland. Forested wetlands located immediately southwest of the MRGO in the Central Wetlands are denoted for expansion. Some of the saline Biloxi Marshes are recommended for conversion to brackish marshes.

Coast 2050 identified specific ecosystem strategies for protecting and sustaining the region's coastal resources. These strategies can be grouped into one of the following five general categories: restoring swamps, restoring and sustaining marshes, protecting the integrity of the shorelines, restoring and maintaining the Chandeleur Islands, and restoring and maintaining critical landforms.

PROJECT SUMMARIES

A total of 68 restoration projects have been authorized in Region 1 (Figures 3 and 4, Table 1). Project specific information is presented below, organized by project funding source.

Breaux Act

A total of 18 projects have been authorized under the direction of the Breaux Act in Region 1, which are anticipated to benefit 12,230 acres of wetlands at a cost of $27,661,644. This includes the Goose Point/Point Platte Marsh Creation (PO-33) project which was authorized in 2004 on the 13th Project Priority List.

The Breaux Act Task Force officially deauthorized the following four projects in Region 1: Violet Freshwater Distribution (PO-09a), Red Mud Demonstration (PO-20), Eden Isles East Marsh Restoration (PO-21), Bayou Bienvenue Pump Station Diversion and Terracing (PO-25).

State

Six projects, which were implemented in Region 1 by the CRD/CED and funded by the Wetlands Trust Fund, are currently estimated to benefit 2,443 acres of land at a cost of $3,673,435.

Parish Coastal Wetlands Restoration Program

The following seven Christmas tree projects have been constructed within Region 1: Blind Lagoon, Crab Pond, Goose Point, LaBranche, The Prairie, Bayou Bienvenue, and Jones Island. In 2004, The Prairie, Goose Point, Blind Lagoon, and Jones Island Christmas tree projects were refurbished. Since 1990, approximately 6,044 linear feet of fences have been constructed in Region 1.

DNR/NRCS/SWCC Vegetation Planting Program

Since 1988, a total of 29 vegetation planting projects have been implemented within Region 1. Several phases exist for many of the planting projects, which span over several years. The 2004 vegetation planting projects for Region 1 included Big Branch Demonstration, Lake Maurepas Demonstration II, New River, St. Bernard Wetlands Foundation, and West Lake Maurepas.

Section 204/1135

Within Region 1, three Section 204/1135 projects were constructed in 1999 along the MRGO between Mile -3 and Mile 14. These projects utilized dredged material from routine maintenance of the MRGO to create approximately 76 acres of wetlands.

Two projects were constructed along the MRGO, Mile 14 to 12 in 2002 and 2003 in Region 1. These projects utilized dredged material from the MRGO to create approximately 163 acres of wetlands behind the MRGO jetty.

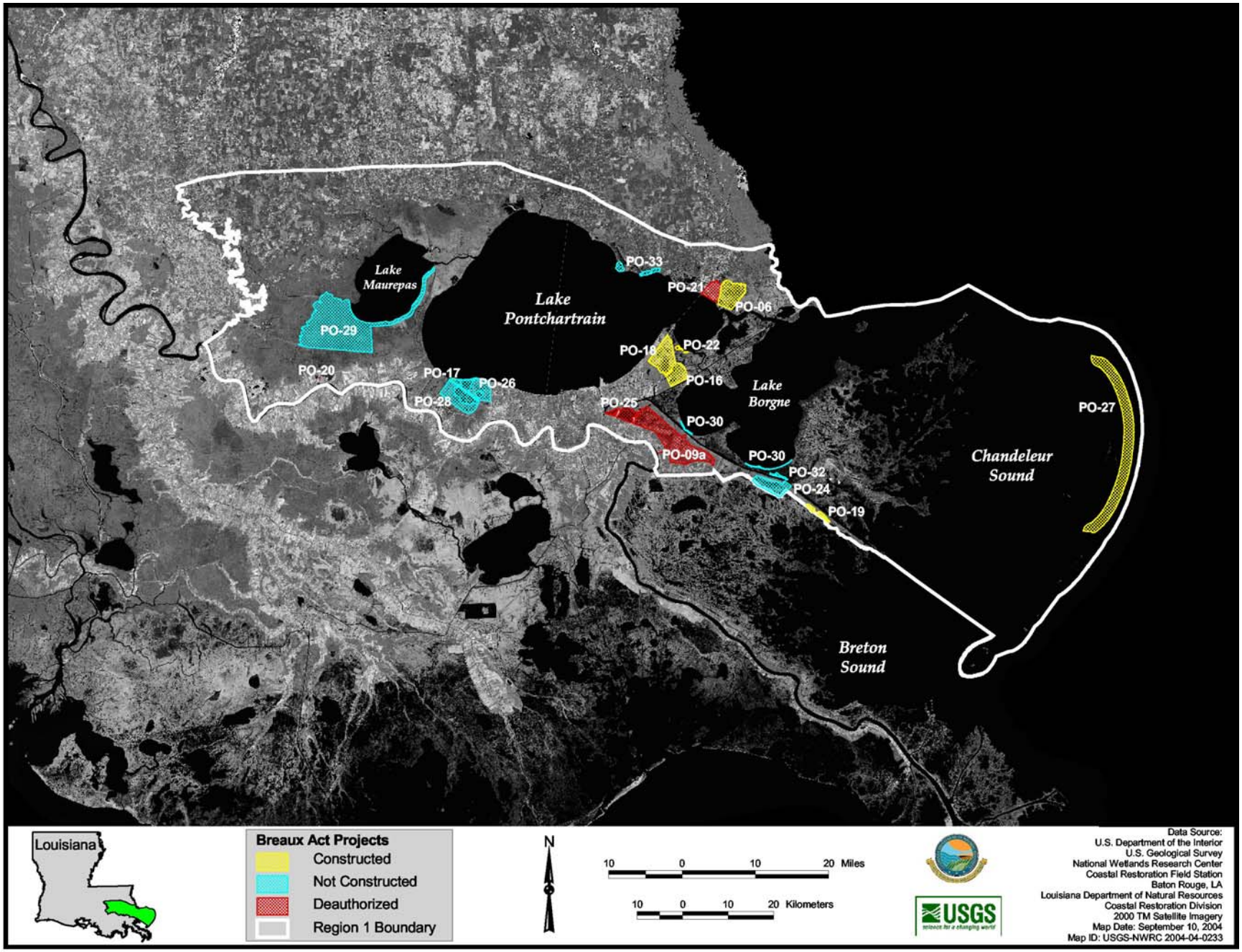


Figure 3. Location of Breaux Act projects authorized in Coast 2050 Region 1.

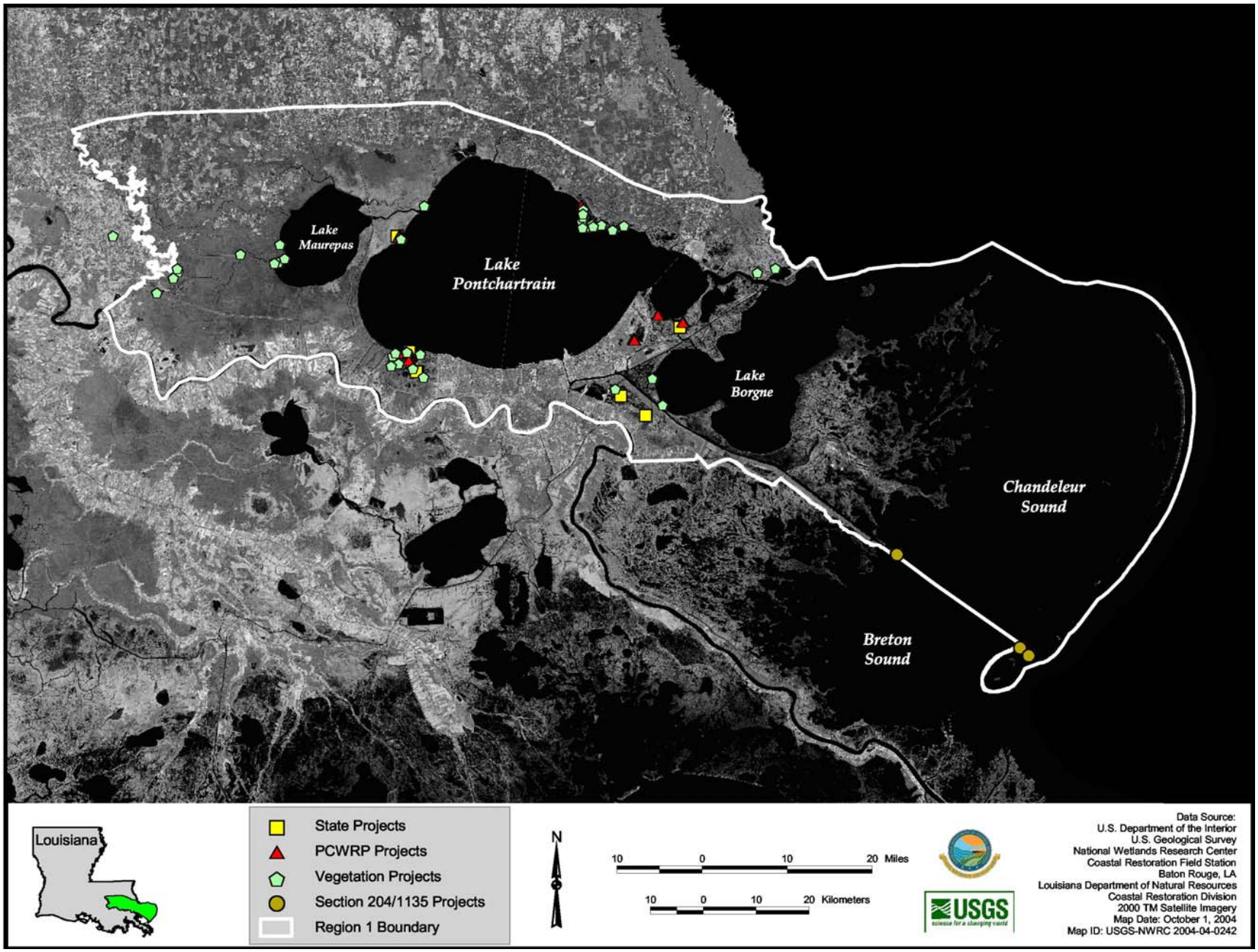


Figure 4. Location of State, PCWRP, Vegetation, and Section204/1135 projects in Coast 2050 Region 1.

Table 1. Restoration projects completed or pending in Coast 2050 Region 1.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	PO-06 (PO-06)	Fritchie Marsh Restoration	HR	2	NRCS	Schedler	Crowe, Schneider	StT.	1,040	2001	$309,687	$751,128	$1,140,858	$3,048,389	$2,201,674	The purpose of the project is to address wetland loss in the area and to improve habitat for wildlife and fisheries by increasing the flow of freshwater into the marsh and managing the outfall. Project features include diverting part of the W-14 canal and installing larger culverts under Highway 90.
Breaux Act	PO-09a (PO-09a)	Violet Freshwater Distribution (Deauthorized)	HR	3	NRCS	Duplessis, Boasso	Odinet, Hutter	StB.	N/A	Deauth.	$85,717	N/A	$42,910	$1,821,438	$128,627	The objective of the outfall management plan was to optimize the use of freshwater and sediment supplied by the existing siphons by managing water flow through the area. This would be accomplished by reducing channelized flow and routing the diverted flow across marshes or through shallow water areas instead of through larger channels. This project was officially deauthorized by the Breaux Act Task Force in October of 2001.
Breaux Act	PO-16 (XPO-52A)	Bayou Sauvage National Wildlife Refuge Hydrologic Restoration, Phase 1	HR	1	USFWS	Duplessis	Odinet	Orl.	1,550	1996	$87,653	$887,847	$654,692	$1,657,708	$1,630,193	The Lake Pontchartrain hurricane protection levee isolated Units 3 and 4 of the Bayou Sauvage Wildlife Refuge from the surrounding marsh complex and established a large freshwater impoundment. The project utilizes pumps to remove the excess water during the spring and summer.
Breaux Act	PO-17 (PPO-10)	Bayou LaBranche Wetland Creation	MC	1	USACE	Chaisson	Smith	StC.	203	1994	$609,391	$2,784,909	$274,584	$4,461,301	$3,668,885	The project goal was to create vegetated wetlands in an area bounded by I-10, Lake Pontchartrain, and Bayou LaBranche. This objective was accomplished by dredging sediment from Lake Pontchartrain.
Breaux Act	PO-18 (XPO-52B)	Bayou Sauvage National Wildlife Refuge Hydrologic Restoration, Phase 2	HR	2	USFWS	Duplessis	Badon	Orl.	1,280	1997	$101,483	$892,402	$648,666	$1,452,035	$1,642,553	The hurricane protection levee system has impounded the marsh in the project area. The project increases the drainage capacity of the system to reduce water levels in the project area. Project features consist of two 36-inch pumps which operate to maintain water levels at 0.5 feet above or below marsh elevation.
Breaux Act	PO-19 (XPO-71)	Mississippi River Gulf Outlet (MRGO) Disposal Area Marsh Protection	HR	3	USACE	Boasso	Odinet	StB.	755	1999	$246,834	$40,000	$26,311	$512,198	$313,145	The objective of the project is to protect and preserve vegetated wetlands by repairing the lateral and rear dikes of the Mississippi River Gulf Outlet (MRGO) disposal areas. Repairs to a 28,000 linear-foot dike, in conjunction with the installation of metal box weirs with a single 40-inch pipe is used to control and divert water flow to prevent the perched marshes from draining.
Breaux Act	PO-20 (XTE-43)	Red Mud Demonstration (Deauthorized)	MC	3	EPA	Amedee	Faucheux	StJo.	N/A	Deauth.	$26,836	$321,499	$122,165	$350,000	$470,500	This project was authorized to determine whether red mud, produced as a by-product of removing alumina from bauxite, could be utilized as marsh-creation material in combination with compost and marsh sediment. Construction of the experimental units was initiated in 1997; however, due to unexpected problems with fill material, liners, and contaminants in the water source, the project was officially deauthorized by the Breaux Act Task Force in August 2001.
Breaux Act	PO-21 (PPO-4)	Eden Isles East Marsh Restoration (Deauthorized)	HR	4	NMFS	Schedler, Hainkel	Schneider	StT.	N/A	Deauth.	$36,078	N/A	$2,947	$5,018,968	$39,025	The project was intended to restore 2,536 acres of drained fastlands by actively managing water levels to maximize marsh creation. There was a change in landowners of the project area during the planning phase of this project. Consequently, the project was officially deauthorized by the Breaux Act Task Force in January 1998.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	PO-22 (XPO-69)	Bayou Chevee Shoreline Protection	SP	5	USACE	Duplessis	Odinet	Orl.	75	2001	$407,864	$1,802,719	$380,871	$2,555,029	$2,591,454	The project is designed to protect currently exposed wetlands areas from erosive wave energy from Lake Pontchartrain, and to enhance the establishment of submerged aquatic vegetation in the ponds behind the rock dikes. This is accomplished by constructing a 2,870 linear-foot rock dike across the mouth of the north cove and a 2,820 linear-foot rock dike, tying into an existing USFWS rock dike, across the south cove.
Breaux Act	PO-24 (PPO-38)	Hopedale Hydrologic Restoration	HR	8	NMFS	Boasso	Odinet	StB.	134	Pending	$250,000	$438,000	$1,115,052	$2,179,491	$1,803,052	This project is designed to abate site-specific wetland loss by replacing collapsed culverts installed in the 1950s near Yscloskey, Louisiana. The project involves re-furbishment and construction of several water control structures designed to prevent tidal surges and reduce wetland deterioration within the project site. Replacement of these structures would allow more rapid drainage of the area, improve fisheries access, reduce wetland loss rates, and protect over 3,000 acres of marsh.
Breaux Act	PO-25 (XPO-74a)	Bayou Bienvenue Pump Station Diversion and Terracing (Deauthorized)	HR MC	8	NMFS	Boasso, Duplessis	Odinet, Richmond	Orl. StB.	N/A	Deauth.	$211,310	N/A	$832	$3,295,574	$212,142	This project was intended to combine the use of existing pump stations with the construction of a diversion channel, water control structures, and earthen terraces planted with smooth cordgrass (*Spartina alterniflora*). This will force the flow of freshwater and nutrients through a deteriorated marsh area to abate site-specific marsh loss. The project was officially deauthorized by the Breaux Act Task Force in April 2002.
Breaux Act	PO-26 (XPO-55a)	Opportunistic Use of the Bonnet Carre´ Spillway	FD	9	USACE	Chaisson	Smith, Ansardi	StC.	177	Pending	$106,104	N/A	$82,279	$150,706	$188,383	This project is intended to abate high salinity stress on vegetated wetlands surrounding Lake Pontchartrain. This objective will be accomplished through the removal of pins from the Bonnet Carre´ Spillway structure during high flow periods in the Mississippi River to allow no more than 4,000 cubic feet per second of water to flow from the river into Lake Pontchartrain.
Breaux Act	PO-27(XPO-95)	Chandeleur Islands Marsh Restoration	VP	9	NMFS	Boasso	Odinet	StB.	220	2001	$261,006	$502,708	$174,263	$143,066	$937,977	This project is intended to accelerate the recovery period of barrier island areas overwashed by Hurricane Georges in 1998 through vegetation plantings. The overwash areas, which encompass 364 acres, are located at 22 sites along the Chandeleur Sound side of the island chain and were planted with smooth cordgrass (*Spartina alterniflora*).
Breaux Act	PO-28 (PPO-07a)	LaBranche Wetlands Terracing, Planting, and Shoreline Protection	SNT SP VP	9	NMFS	Chaisson	Smith, Ansardi	StC.	489	Pending	$305,266	N/A	$1,570	$821,752	$306,836	Located along Lake Pontchartrain, the project intends to reduce emergent marsh loss along the shoreline by restoring and creating 489 acres through marsh terracing, shoreline protection, and vegetation planting.
Breaux Act	PO-29 (Complex Project)	River Reintroduction into Maurepas Swamp	FD	11	EPA	Fontenot, Amedee, Chaisson	Faucheux, Erdey, Lambert, Beard	StJo.	5,438	Pending	$6,731,444	N/A	$48,863	$5,434,288	$6,780,307	This project is intended to restore a natural hydrologic regime and increase nutrient inputs in cypress-tupelo swamp tracts south of Lake Maurepas. This will be accomplished through the diversion of Mississippi River water into an area of degraded swamp.
Breaux Act	PO-30	Lake Borgne Shoreline Protection	SP	10	EPA	Boasso	Hutter, Odinet	StB.	167	Pending	$1,645,962	N/A	$21,988	$1,334,360	$1,667,950	The goal of this project is to maintain the integrity of the narrow strip of marsh that separates Lake Borgne from the Mississippi River Gulf Outlet (MRGO). This land protects the communities of Shell Beach, Yscloskey, and Hopedale from direct exposure to lake wave energy and storm surges. This will be accomplished through construction of a continuous nearshore rock breakwater. This project was merged with the adjoining project, PO-31.

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Breaux Act	PO-31	Lake Borgne Shoreline Protection at Bayou Dupre	SP	11	EPA	Dean	Odinet	StB.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	This project is necessary to maintain the integrity of the narrow strip of marsh that separates Lake Borgne from the Mississippi River Gulf Outlet (MRGO). This land protects the communities of Shell Beach, Yscloskey, and Hopedale from direct exposure to lake wave energy and storm surges. This project was initially proposed and approved as an 11th list project, but was subsequently merged with the adjoining project, PO-30. The project will henceforth be referred to as PO-30.
Breaux Act	PO-32	Lake Borgne and MRGO Shoreline Protection	SP	12	USACE	Boasso	Odinet	StB.	266	Pending	$1,317,413	N/A	$30,932	$1,348,345	$1,348,345	The objective of this project is to preserve the marsh between Lake Borgne and the Mississippi River Gulf Outlet (MRGO) by preventing shoreline erosion. A rock dike will be constructed along the Lake Borgne shoreline and along the north bank of the MRGO.
Breaux Act	PO-33	Goose Point/Point Platte Marsh Creation	MC	13	USFWS	Schedler, Hainkel	Winston	StT.	436	Pending	$1,730,596	N/A	N/A	$1,930,596	$1,730,596	The objective of this project is to create marsh habitat through the deposition of dredged material in open water areas in the vicinity of Goose Point and Point Platte as well as to maintain the lake rim function along this section of the north shore of Lake Pontchartrain.
State	PO-01	Violet Siphon	FD	N/A	N/A	Boasso	Odinet, Hutter	StB.	84	1992	N/A	N/A	N/A	N/A	$380,584	The purpose of this project is to return into operation the existing siphon, and to enlarge the size of the diversion so that more sediment and freshwater are available to offset marsh subsidence and saltwater intrusion.
State	PO-02c	Bayou Chevee	SP	N/A	N/A	Duplessis	Odinet	Orl.	75	1994	N/A	N/A	N/A	N/A	$62,000	This project installed 2,000 feet of brush fences at the mouth of Bayou Chevee.
State	PO-03	LaBranche Shoreline Stabilization and Canal Closure	SP	N/A	N/A	Chaisson	Smith, Ansardi	StC.	1,750	1987	N/A	N/A	N/A	N/A	$1,324,000	The purpose of this project is to restore the integrity of the shoreline which separates Lake Pontchartrain from the western edge of the LaBranche wetlands.
State	PO-03b	LaBranche Shoreline	SP	N/A	N/A	Chaisson	Smith	StC.	50	1996	N/A	N/A	N/A	N/A	$1,290,851	A rock breakwater was constructed along the Lake Pontchartrain shoreline, east of Bayou LaBranche, to protect the hydrologic boundary between the lake and the wetlands from being breached.
State	PO-08	Central Wetlands	FD	N/A	N/A	Boasso, Duplessis	Odinet, Hutter	StB.	300	1992	N/A	N/A	N/A	N/A	$250,000	This project is designed to provide freshwater, nutrients, and sediment associated with storm water runoff to an area of marsh near the Violet Siphon, PO-01.
State	PO-10	Turtle Cove	SP	N/A	N/A	Chaisson	Faucheux	StJo.	184	1994	N/A	N/A	N/A	N/A	$366,000	A 1,640 foot rock-filled gabion breakwater was constructed to maintain and protect the Lake Pontchartrain shoreline that shelters "The Prairie" (an 800-acre expanse of shallow, open water marsh bordered by organic freshwater marsh) from high wave energies, and to encourage sediment deposition behind the gabion structure. An additional $195,600 was used for maintenance in 2001.
PCWRP		Crab Pond	SP	N/A	N/A	Duplessis	Odinet	Orl.	1	1991	N/A	N/A	N/A	N/A	$91,646	The Crab Pond, an open-water area adjacent to Chef Menteur Pass, is located within the Bayou Sauvage National Wildlife Refuge. Christmas tree fences were constructed to prevent Chef Menteur Pass from eroding further into Crab Pond. Fences were originally constructed and filled in 1991 and maintenance was performed in 1994, 1997, 1998, 2000, and 2001.
PCWRP		Goose Point	SP	N/A	N/A	Schedler, Hainkel	Winston	StT.	3	1991	N/A	N/A	N/A	N/A	$108,935	The Goose Point project is located along the northern shore of Lake Pontchartrain. The project was constructed to restrict the opening between Lake Pontchartrain and the inner marsh, to protect existing marsh vegetation from erosion, and to encourage the colonization and growth of new marsh vegetation. Fences were originally constructed and filled in 1991 and maintenance was performed in 1992, 1993, 1998, 2000, 2001, 2003 and 2004.

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PCWRP		The Prairie	SP	N/A	N/A	Chaisson	Faucheux	StJo.	3	1991	N/A	N/A	N/A	N/A	$165,387	Wave action from Lake Pontchartrain was eroding the strip of land adjacent to "The Prairie", an 800-acre expanse of shallow, open water bordered by freshwater marsh between Lakes Maurepas and Pontchartrain. The project was constructed to maintain the separation between The Prairie and Lake Pontchartrain, to promote the growth of marsh vegetation, and to prevent the erosion of the lake rim. Fences were originally constructed and filled in 1991 and maintenance was performed in 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2003 and 2004. A total of 1,500 California bulrush (*Schoenoplectus californicus*) and 100 roseau cane (*Phragmites australis*) were planted adjacent to the fences.
PCWRP		LaBranche	SP	N/A	N/A	Chaisson	Smith	StC.	5	1991	N/A	N/A	N/A	N/A	$184,800	The LaBranche Christmas tree fences were constructed in a series of open-water ponds located within the LaBranche wetlands. These pond edges are susceptible to erosion by wind-generated waves. The brush fences were designed to create emergent marsh in the LaBranche wetland area. Fences were originally constructed and filled in 1991 and maintenance was performed in 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2003.
PCWRP		Blind Lagoon	SP	N/A	N/A	Duplessis	Odinet	Orl.	1	2000	N/A	N/A	N/A	N/A	$53,250	Christmas tree fences were placed in a wind-row manner to trap sediment and provide wildlife habitat in the Bayou Sauvage National Wildlife Refuge. Fences were originally constructed and filled in 2000 and maintenance was performed in 2001 and 2004.
PCWRP		Bayou Bienvenue	SP	N/A	N/A	Dean	Odinet	StB.	1	2001	N/A	N/A	N/A	N/A	$18,000	Approximately 400 feet of brush fence were constructed to the southwest of Bayou Gauche to slow tidal-influenced water exchange, trap sediment, and protect vegetation along Bayou Bienvenue.
PCWRP		Jones Island	SP	N/A	N/A	Hainkel	Winston	Tan.	10	2000	N/A	N/A	N/A	N/A	$72,000	Created Christmas tree islands and planted vegetation (cypress seedlings) to re-establish bottomland forest. Fences were originally constructed and filled in 2000 and maintenance was performed in 2001, 2002, 2003 and 2004.
Vegetation		Turtle Cove	VP	N/A	N/A	Chaisson	Faucheux	StJo.	6	1987, 1996	N/A	N/A	N/A	N/A	$3,254	A total of 480 giant cutgrass (*Zizaniopsis miliacea*) plants were used over 2,400 linear feet of shoreline in order to establish vegetation in a reach of eroded shoreline on Lake Pontchartrain. These plants were installed behind a rock breakwater structure.
Vegetation		Madisonville Lighthouse	VP	N/A	N/A	Hainkel	Winston	StT.	10	1988	N/A	N/A	N/A	N/A	$5,203	A total of 4,400 smooth cordgrass (*Spartina alterniflora*) plants were used to decrease erosion from wave action in Lake Pontchartrain near the Madisonville Lighthouse, which is located on a peninsula extending about 600 feet into Lake Pontchartrain. Plants were installed around a small nearby island, and along the sides of the peninsula where there was no rock protection.
Vegetation		Goose Point	VP	N/A	N/A	Schedler, Hainkel	Winston	StT.	166	1991, 1993, 1994, 1995, 1996, 1997, 1998, 2001	N/A	N/A	N/A	N/A	$119,158	A total of 31,200 smooth cordgrass (*Spartina alterniflora*) plants, 500 seashore paspalum (*Paspalum vaginatum*) plants, and 500 California bulrush (*Schoenoplectus californicus*) plants were used in order to create a vegetation buffer against wave action from Lake Pontchartrain, re-colonize bare mud flats, and reduce interior marsh erosion along Lake Pontchartrain.

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Vegetation		LaBranche	VP	N/A	N/A	Chaisson	Smith, Ansardi	StC.	113	1991, 1992, 1994, 1996, 1998, 1999, 2000	N/A	N/A	N/A	N/A	$69,284	A total of 2,210 smooth cordgrass (*Spartina alterniflora*) plants, 7,800 California bulrush (*Schoenoplectus californicus*) plants, and 209 giant cutgrass (*Zizaniopsis miliacea*) plants were used to trap sediment, reduce wave erosion, and to establish marsh vegetation in the interior of a spoil disposal area.
Vegetation		La Branche Sediment Fence	VP	N/A	N/A	Chaisson	Ansardi	StC.	5	1992	N/A	N/A	N/A	N/A	$3,432	Approximately 210 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) and 209 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were planted to renourish marsh areas impacted by nutria herbivory.
Vegetation		MRGO - North Shore	VP	N/A	N/A	Boasso	Hutter	StB.	17	1995	N/A	N/A	N/A	N/A	$10,170	A total of 1,500 smooth cordgrass (*Spartina alterniflora*) plants were used along the Mississippi River Gulf Outlet (MRGO) in order to create marsh and to provide shoreline protection along Bayou Dupree.
Vegetation		La Branche Marsh Creation	VP	N/A	N/A	Chaisson	Smith	StC.	18	1996	N/A	N/A	N/A	N/A	$12,800	A total of 1,600 trade gallon containers of California bulrush (*Schoenoplectus californicus*) was planted in the interior spoil disposal area to enhance productivity.
Vegetation		Bayou Bienvenue	VP	N/A	N/A	Boasso	Hutter	StB.	13	1996	N/A	N/A	N/A	N/A	$7,580	A total of 430 black mangrove (*Avicennia germinans*) trees and 688 smooth cordgrass (*Spartina alterniflora*) plants were used on Bayou Bienvenue along the levee and along an interior borrow canal in order to decrease shoreline erosion.
Vegetation		Hog Island	VP	N/A	N/A	Schedler	Crowe	StT.	18	1999	N/A	N/A	N/A	N/A	$10,848	A total of 800 giant cutgrass (*Zizaniopsis miliacea*) plants and 800 California bulrush (*Schoenoplectus californicus*) plants were used to provide a vegetation buffer along an eroding shoreline segment.
Vegetation		Salvador Pump-in	VP	N/A	N/A	Ullo	Wooton	StC.	11	1999	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 giant cutgrass (*Zizaniopsis miliacea*) plants were used along 5,000 linear feet of shoreline in order to protect an area of eroded shoreline, absorb wave energy, and prevent continued erosion.
Vegetation		Blind River	VP	N/A	N/A	Fontenot	Erdey	Asc.	14	2000	N/A	N/A	N/A	N/A	$8,136	A total of 200 California bulrush (*Schoenoplectus californicus*) plants and 1,000 containers of giant cutgrass (*Zizaniopsis miliacea*) plants were used in selected areas to provide a vegetation buffer and reclaim eroded areas along the banks of Blind River.
Vegetation		West Pearl River	VP	N/A	N/A	Schedler	Crowe	StT.	9	2000	N/A	N/A	N/A	N/A	$5,424	A total of 400 giant cutgrass (*Zizaniopsis miliacea*) plants and 400 California bulrush (*Schoenoplectus californicus*) plants were used along a barren channel bank to stabilize the eroding bank.
Vegetation		Bayou La Branche	VP	N/A	N/A	Chaisson	Smith	StC.	11	2001	N/A	N/A	N/A	N/A	$7,558	A total of 1,000 California bulrush (*Schoenoplectus californicus*) plants were placed along Bayou La Branche to provide a buffer against shoreline erosion. This particular stretch of the canal bank is currently at risk of breaching, allowing water exchange between the canal and the adjacent marsh.

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Vegetation		Saveiro Canal	VP	N/A	N/A	Amedee	Lambert	Asc.	9	2000, 2001	N/A	N/A	N/A	N/A	$7,260	Both giant cutgrass (*Zizaniopsis miliacea*) and California bulrush (*Schoenoplectus californicus*) were planted along Saveiro Canal, east of Sorrento, to create a buffer against shoreline erosion.
Vegetation		Lake Maurepas	VP	N/A	N/A	Fontenot	Erdey	Liv.	9	2001	N/A	N/A	N/A	N/A	$7,524	A total of 800 giant cutgrass (*Zizaniopsis miliacea*) plants were used in an attempt to close off an abandoned oil field canal located three miles north of the Blind River - Lake Maurepas junction.
Vegetation		Big Branch Shore Demo	VP	N/A	N/A	Schedler	Winston	StT.	7	2002	N/A	N/A	N/A	N/A	$4,816	Five hundred trade gallon containers of smooth cordgrass (*Spartina alterniflora*) and 136 4-inch containers of bitter panicum (*Panicum amarum*) were planted to demonstrate the effects of fertilizer application to smooth cordgrass on a shoreline planting, and to demonstrate the effectiveness of establishing bitter panicum on shallow sand banks; 2,908 linear feet of plantings were created.
Vegetation		Lake Maurepas Demo	VP	N/A	N/A	Hainkel	Powell	Liv.	7	2002	N/A	N/A	N/A	N/A	$6,200	A river bank planting using 600 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and a shoreline planting using 200 feet of coconut fiber logs planted with 100 plugs of giant cutgrass (*Zizaniopsis miliacea*) were done to create a vegetative buffer along Blind River and to stabilize barren shoreline of Lake Maurepas in an area that was used by the oil industry; 3,200 feet of river bank and lake shoreline was protected.
Vegetation		New Orleans GIWW	VP	N/A	N/A	Johnson	Ansardi	Orl.	6	2002	N/A	N/A	N/A	N/A	$4,000	This is a canal bank project covering 2,500 linear feet using 500 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) to establish a vegetation corridor on what used to be the bank of the GIWW.
Vegetation		La Branche '02 Demo	VP	N/A	N/A	Chaisson	Ansardi	StC.	11	2002	N/A	N/A	N/A	N/A	$9,000	This interior marsh planting project used 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) and 200 feet of unvegetated coconut fiber logs to reclaim marshland that had eroded and subsided; a total of 5,000 feet was planted.
Vegetation		New River Canal	VP	N/A	N/A	Amedee	Lambert	Asc.	9	2002	N/A	N/A	N/A	N/A	$6,400	This canal bank planting used 800 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) to vegetate a newly lifted levee bank along the canal; 4,000 ft of canal bank was vegetated.
Vegetation		Point Platte Demo Project	VP	N/A	N/A	Schedler	Winston	StT.	1	2003	N/A	N/A	N/A	N/A	$1,550	Approximately 100 trade gallon containers and 150-feet of smooth cordgrass (*Spartina alterniflora*) plugs, impregnated into coconut fiber, were planted to establish vegetation on an oil canal spoilbank.
Vegetation		Amite River Diversion Canal	VP	N/A	N/A	Fontenot	Beard	Liv.	9	2003	N/A	N/A	N/A	N/A	$6,400	A total of 800 trade gallon containers of California bulrush (*Schoenoplectus californicus*) was planted to establish a vegetative buffer to dampen wave action along the intersection of two channels.
Vegetation		Bayou Conway	VP	N/A	N/A	Amedee	Lambert	Asc.	11	2003	N/A	N/A	N/A	N/A	$8,000	Approximately 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) was planted on Bayou Conway to create vegetation on new spoil.
Vegetation		Couba Island Cut-off	VP	N/A	N/A	Chaisson	Smith	StC.	9	2003	N/A	N/A	N/A	N/A	$6,400	Approximately 800 units of California bulrush (*Schoenoplectus californicus*) were planted to regain marsh in an old oil field canal.
Vegetation		Big Branch Demonstration	VP	N/A	N/A	Schedler	Winston	StT.	5	2004	N/A	N/A	N/A	N/A	$7,725	A total of 200 trade gallon containers and 1,225 feet of coconut fiber mats impregnated with smooth cordgrass (*Spartina alterniflora*) were planted to determine whether or not coconut mats prevent herbivor damage.

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Vegetation		Lake Maurepas Demonstration II	VP	N/A	N/A	Fontenot	Erdey	StT.	1	2004	N/A	N/A	N/A	N/A	$1,650	Approximately 150 feet of coconut fiber mats and 100 feet of coconut fiber logs with giant cutgrass (*Zizaniopsis miliacea*) were used to create a vegetative buffer to stabilize the barren shoreline of Lake Maurepas.
Vegetation		New River	VP	N/A	N/A	Amedee	Lambert	Asc.	9	2004	N/A	N/A	N/A	N/A	$6,400	Approximately 800 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to establish vegetation on a newly dredged canal.
Vegetation		St. Bernard Wetlands Foundation	VP	N/A	N/A	Boasso	Hutter	StB.	1	2004	N/A	N/A	N/A	N/A	$750	A total of 150 feet of coconut fiber mats impregnated with smooth cordgrass (*Spartina alterniflora*) were planted to demonstrate the effectiveness of coconut fiber materials in a saline marsh.
Vegetation		West Lake Maurepas	VP	N/A	N/A	Amedee	Faucheux	StJo.	9	2004	N/A	N/A	N/A	N/A	$6,400	A total of 800 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted on newly accreted area at the mouth of the Blind River.
Section 204/1135		MRGO, Berm, Mile -2 to -3	DM	N/A	N/A	Boasso	Wooton	Plaq.	N/A	1999	N/A	N/A	N/A	N/A	$150,000	This Section 204 project utilized material from maintenance dredging activities along the Mississippi River Gulf Outlet (MRGO) to nourish the littoral system that feeds Breton Island. This project was completed in August 1999.
Section 204/1135		MRGO, Breton Island Restoration, Mile 2.3 to 4.0	DM	N/A	N/A	Boasso	Wooton	Plaq.	26	1999	N/A	N/A	N/A	N/A	$1,050,000	This Section 204 project utilized material from maintenance dredging activities along the Mississippi River Gulf Outlet (MRGO) to repair Breton Island. This project was completed in November 1999.
Section 204/1135		MRGO (1999), Mile 14 to 11	DM	N/A	N/A	Boasso	Odinet	StB.	50	1992	N/A	N/A	N/A	N/A	$350,000	This Section 204 project provided for the unconfined placement of 3,468,901 cubic yards of material into shallow water adjacent to the south jetty at about mile 15.3. The material was dredged from miles 14.0 to 11.0 of the Mississippi River Gulf Outlet (MRGO) navigation channel and placed to an elevation conducive to marsh vegetation establishment.
Section 204/1135		MRGO, Mile 14 to 12 (2002)	DM	N/A	N/A	Boasso	Odinet	StB.	50	2002	N/A	N/A	N/A	N/A	$290,000	The project involved pumping approximately 1.6 million cubic yards to create some 50 acres of marsh behind the MRGO jetty. This project was fast tracked due to the impact of Hurricane Lili and Tropical Storm Isidore.
Section 204/1135		MRGO, Mile 14 to 12 (2003)	DM	N/A	N/A	Boasso	Odinet	StB.	113	2003	N/A	N/A	N/A	N/A	$580,000	This project involved pumping 4.3 million cubic yards of sediments to create 113 acres of marsh. The material was dredged from miles 14.0 to 12.0 of the Mississippi River Gulf Outlet (MRGO) navigation channel and placed at an elevation conducive to marsh vegetation establishment.
FEMA	DSR-81768	LaBranche Wetlands (FEMA)	SP	N/A	N/A	Chaisson	Smith	StC.	N/A	2000	N/A	N/A	N/A	N/A	$42,800	A 700-foot section of a Christmas tree brush fence was repaired. This project was damaged by Hurricane Georges, Hurricane Earl, and Tropical Storm Francis in 1998.

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Other	HPL-MIT	Lake Pontchartrain Mitigation Project	SP	N/A	N/A	Chaisson	Faucheux	StJo.	600	1996	N/A	N/A	N/A	N/A	$2,225,000	This project consisted of a near-shore, segmented breakwater system in Lake Pontchartrain parallel to a five-mile reach of the Manchac Wildlife Management Area. The project specifically mitigated for damages resulting from construction of the Lake Pontchartrain Hurricane Protection Project.
Other	PO-4355NP4	Fontainebleau State Park Mitigation	SP DM	N/A	N/A	Schedler	Winston	StT.	6	1999	N/A	N/A	N/A	N/A	$225,000	This project repaired a section of breached shoreline by depositing approximately 9,000 cubic yards of sand for a feeder berm on the easternmost end of Fontainebleau State Park.

Program: Breaux Act=Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA); State=Restoration projects funded primarily by the State of Louisiana through the Coastal Restoration Division; PCWRP=Parish Coastal Wetlands Restoration Program (Christmas Tree Program); Vegetation=DNR/NRCS/SWCC Vegetation Planting Program; Section 204/1135= Water Resource Development Act Sections 204 and 1135 beneficial use of dredged material projects; WRDA=Water Resources Development Act; Dedicated Dredging Program= State project LA-01a and LA-01b .

Project Type: HR=Hydrologic Restoration; DM=Beneficial Use of Dredged Material; MM=Marsh Management; MC=Marsh Creation; SP=Shoreline Protection; FD=Freshwater Diversion; VP=Vegetation Planting; SNT=Sediment and Nutrient Trapping; OM=Outfall Management; BI=Barrier Island; SD=Sediment Diversion.

PPL: Priority Project List (as authorized each year by the Breaux Act Task Force).

Agency/Sponsor: EPA=Environmental Protection Agency; NMFS=National Marine Fisheries Service; NRCS=Natural Resources Conservation Service; NWRC=National Wetlands Research Center; USFWS=U.S. Fish and Wildlife Service; USACE=U.S. Army Corps of Engineers.

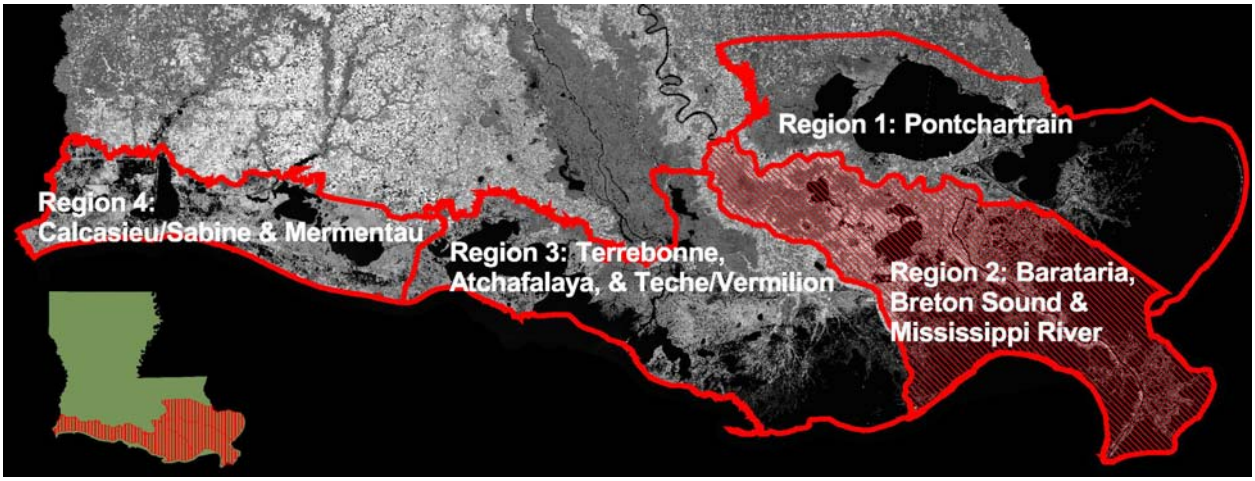
Parish: Asc.=Ascension, Asu.=Assumption, Cam.=Cameron, Ibe.=Iberia, Jef.=Jefferson, Laf.=Lafourche, Orl.=Orleans, Plaq.=Plaquemines, StB.=St. Bernard, StC.=St. Charles, StJo.=St. John the Baptist, StM.=St. Mary, StT.=St. Tammany, Tan.=Tangipahoa, Ter.=Terrebonne, Ver.=Vermilion.

Anticipated Acres Benefitted: N/A for Breaux Act demonstration and deauthorized projects.

Baseline Cost Estimates and Current Cost Estimates for Breaux Act projects are from the USACE. Costs for other restoration programs are from DNR's Contract and Budget Section. Baseline Cost and Current Cost Estimate both include contingency funds. Beginning with Breaux Act PPL 10, project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity.

N/A=Not Applicable.

REGION 2



INTRODUCTION

Region 2 includes the Breton Sound and Barataria basins and the Mississippi River Delta. It stretches from the MRGO on the east to Bayou Lafourche on the west, and from the Mississippi River on the north to the Gulf of Mexico on the south. This region covers all or part of the following parishes: St. Bernard, Plaquemines, Jefferson, Lafourche, St. Charles, St. James, St. John the Baptist, and Assumption.

Region 2 contains 894,700 acres of coastal wetlands. These wetlands are classified as 90,000 acres of bottomland hardwood forests; 146,000 acres of cypress-tupelo swamps; 220,100 acres of fresh marshes; 73,000 acres of intermediate marshes; 214,500 acres of brackish marshes; and 151,100 acres of saline marshes.

This region lost approximately 52,160 acres of wetlands between 1990 and 2000 (an average of 5,184 acres per year). This region is currently experiencing some of the highest rates of land loss across Louisiana's coast; therefore, there is a high concentration of restoration projects in the area. Factors that are contributing to this degradation include: altered hydrology, oil and gas access canals and associated saltwater intrusion, nutria herbivory, wind induced shoreline erosion, and high subsidence rates.

Habitat objectives for the year 2050 are the result of a cooperative effort between the public, parish governments, and Coast 2050 Regional Team members. Several large diversions into the Barataria Basin are proposed to extend the fresh marshes south of Little Lake and across the basin through the Myrtle Grove area. Another objective is to create a new strip of fresh marsh parallel to the Mississippi River from West Pointe a la Hache to Venice and near the river in American Bay. A band of intermediate marsh is desired gulf-ward of the fresh marshes, and brackish marshes are desired to its south in the vicinity of Barataria Bay. Additional objectives include the restoration and maintenance of barrier islands and the barrier shoreline.

Coast 2050 identified specific regional ecosystem strategies for protecting and sustaining the region's coastal resources. These specific ecosystem strategies can be grouped into one of the following five general categories: restoring swamps; restoring and sustaining marshes; protecting bay and lake shorelines; restoring and maintaining barrier headlands, islands, and shorelines; and maintaining critical

landforms on the Central Basin Land Bridge.

PROJECT SUMMARIES

A total of 143 restoration projects have been authorized for Region 2 (Figures 5 and 6, Table 2). Project specific information is presented below, organized by project funding source.

Breaux Act

A total of 43 projects have been authorized under the direction of the Breaux Act in Region 2. They are anticipated to benefit 66,373 acres of wetlands at a cost of $282,391,956. Construction Unit 3 of the Barataria Basin Landbridge Shoreline Protection, Phase 3 (BA-27c) project was constructed under the Breaux Act in Region 2 this year.

The Breaux Act Task Force officially deauthorized eight projects in Region 2, which are: Fourchon Hydrologic Restoration (BA-18), Bayou Perot and Bayou Rigolettes Marsh Restoration (BA-21), White's Ditch Outfall Management (BS-04a), Grand Bay Crevasse (BS-07), Pass-a-Loutre Crevasse (MR-07), Beneficial Use of Hopper Dredged-Material Demonstration (MR-08), Upper Oak River Freshwater Siphon phase I (BS-09), and Bayou L'Ours Ridge Hydrologic Restoration (BA-22).

State

Nine projects have been implemented to date in Region 2 by the CRD/CED and funded by the Wetlands Trust Fund and/or local parish funds. These projects benefited an estimated 9,143 acres of land at a cost of $17,128,368.

Parish Coastal Wetlands Restoration Program

Ten Christmas tree projects have been constructed in Region 2, totaling 18,045 linear feet of protective fences. The Goose Bayou, Whiskey Canal, Leeville, Fourchon, Eighty Arpent Canal, and Bayou Lafourche projects were constructed between 1991 and 2000, and have been maintained periodically. In 2004, Bayou Lafourche, Bayou Gauche, and Catfish Lake Christmas tree projects were refurbished.

DNR/NRCS/SWCC Vegetation Planting Program

Since 1988, a total of 72 vegetation planting projects have been implemented in Region 2. Several phases, which span over several years, exist for many of the planting projects. The vegetation planting projects that were constructed in 2004 in Region 2 are Bayou Mandeville II, Bayou Perot Cypress Tree, Lake Des Allemands, Myrtle Grove and, Simoneaux Ponds Demonstration.

Section 204/1135

Within Region 2, the three Section 204/1135 projects which created marsh using dredged material are Grand Terre Island Wetland Creation, Barataria Bay Waterway (mile 31 to 24.5), and Barataria Bay Waterway (Grand Terre, Phase II). Approximately 115 acres of marshes were created on Grand Terre Island. The two Barataria Bay Waterway projects created approximately 205 acres of marshes along 6.5 miles of waterway.

Federal (WRDA)

Two freshwater diversion projects, authorized under the Federal Water Resources Development Act, will benefit the largest acreage of wetlands, thus far. The Davis Pond Freshwater Diversion project, completed in 2001, will preserve 33,000 acres of deteriorating wetlands in the Barataria Basin. The Caernarvon Freshwater Diversion project, completed in 1991, will preserve 16,000 acres of wetlands in the Breton Sound hydrologic basin.

Other

In Region 2, the Fifi Island Restoration Project, which received funding from the Louisiana Coastal Impact Assistance Plan, was constructed in 2003. An additional project, Fisheries Habitat Restoration on West Grand Terre Island, was also constructed in 2003 and received funding through a NOAA Fisheries grant.

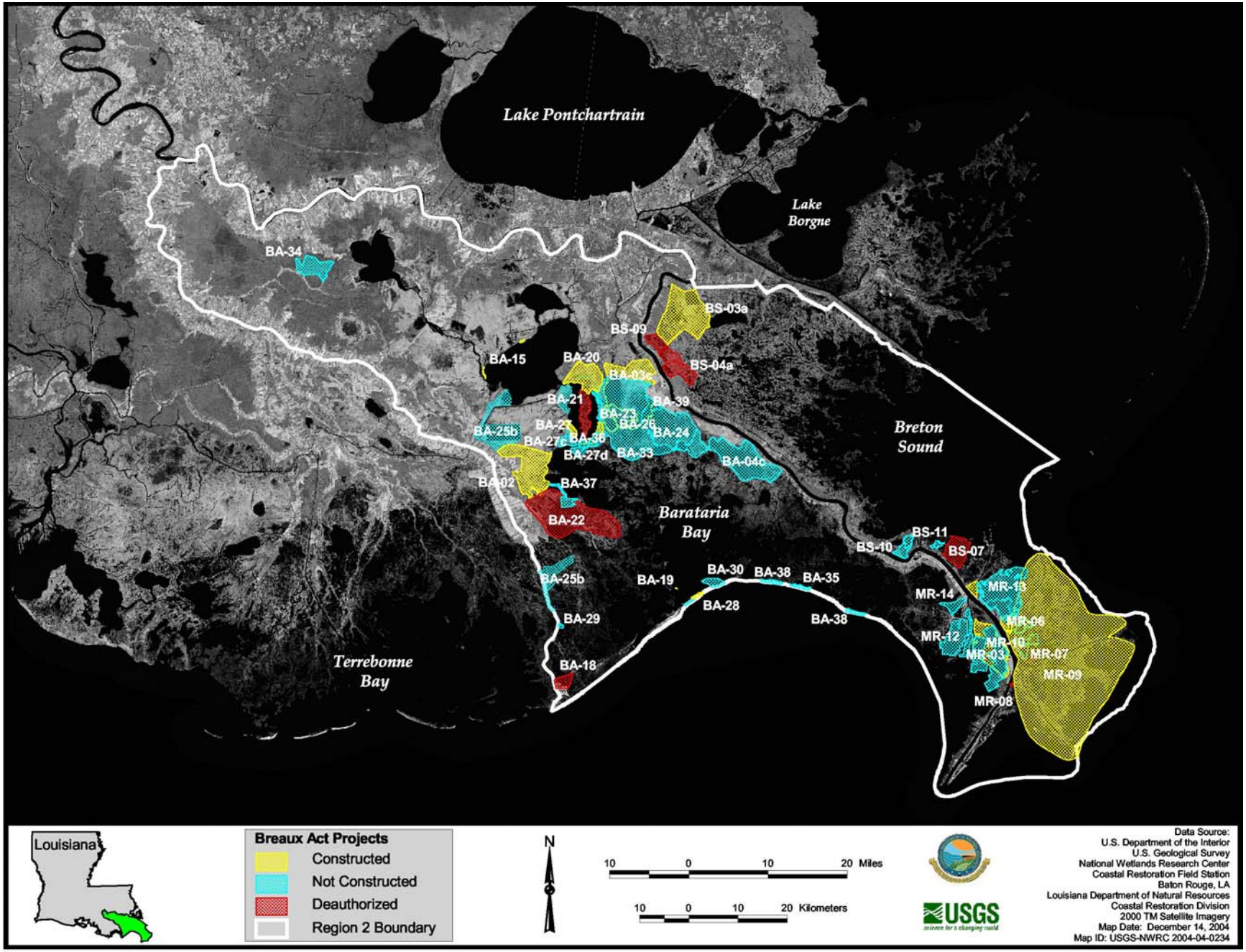


Figure 5. Location of Breaux Act projects authorized in Coast 2050 Region 2.

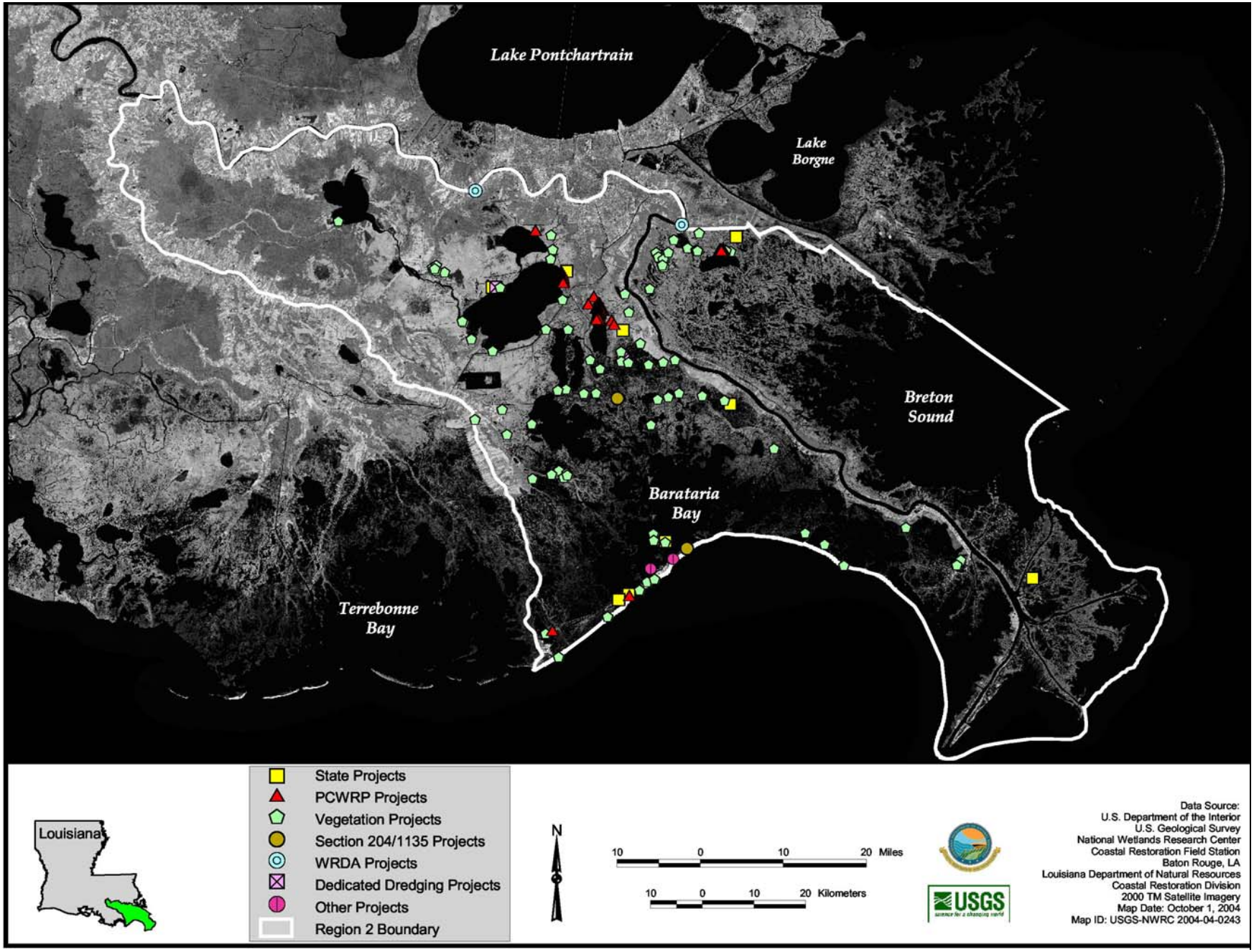


Figure 6. Location of State, PCWRP, Vegetation, Section204/1135, WRDA, Dedicated Dredging, and Other projects in Coast 2050 Region 2.

Table 2. Restoration projects completed or pending in Coast 2050 Region 2.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	BA-02 (BA-02)	GIWW (Gulf Intracoastal Waterway) to Clovelly Hydrologic Restoration	HR	1	NRCS	Dupre	Pitre, Wooton	Laf.	175	2000	$981,549	$5,462,880	$2,471,703	$8,141,512	$8,916,131	This project will protect approximately 14,948 acres of intermediate wetlands by restoring natural hydrologic conditions. The project utilizes canal plugs, weirs, and the rebuilding of low overflow banks to better retain freshwater and prevent rapid salinity increases resulting from saltwater intrusion.
Breaux Act	BA-03c (BA-03c)	Naomi Outfall Management	OM	5	NRCS	Boasso, Ullo	Wooton	Plaq.	633	2002	$303,108	$800,169	$1,078,150	$1,686,865	$2,181,427	The goal of this project is to reduce saltwater intrusion and enhance wetland productivity by managing the outfall of eight existing siphons. The two fixed crest weirs assist in the management of existing siphon outfall water from the Mississippi River into adjacent west bank wetlands.
Breaux Act	BA-04 (BA-04c)	West Pointe a la Hache Outfall Management	OM	3	NRCS	Boasso	Wooton	Plaq.	1,087	Pending	$637,409	$1,764,443	$1,666,193	$881,148	$4,068,045	This project provides for management of the West Pointe a la Hache siphon outfall area to maximize the retention of freshwater, nutrients, and sediment within interior brackish marshes to counteract saltwater intrusion and wetland loss. This project utilizes water control structures to divert water from the main distributary channels to secondary channels and allow more efficient flow over the marsh.
Breaux Act	BA-15 (BA-15)	Lake Salvador Shore Protection Demonstration	SP	3	NMFS	Chaisson	Smith	StC.	N/A	1998	$363,162	$2,058,356	$388,834	$1,444,628	$2,810,353	The project is intended to maintain the shoreline along a section of Lake Salvador and help re-establish the natural hydrology of interior marsh. Phase I of the project was constructed to demonstrate the effectiveness of four separate types of segmented breakwaters in a poor soil environment. Phase II of the project included the installation of 8,000 feet of continuous rock structure along the western section of the lake.
Breaux Act	BA-18 (BA-18)	Fourchon Hydrologic Restoration (Deauthorized)	HR	1	NMFS	Ullo	Pitre	Laf.	N/A	Deauth.	$7,340	N/A	$363	$252,036	$7,703	The goal of this project was to restore tidal exchange to 2,400 acres of impounded wetlands. The project was officially deauthorized by the Breaux Act Task Force in July of 1994 at the request of the landowner.
Breaux Act	BA-19 (BA-19)	Barataria Bay Waterway Wetland Restoration	MC	1	USACE	Ullo	Wooton	Jef.	445	1996	$157,135	$945,791	$64,906	$1,759,257	$1,167,832	This project was authorized to create marsh in shallow water areas adjacent to the Barataria Bay Waterway. However, oyster leases prohibited the use of the dredged material at all of the marsh creation sites. As an alternative, approximately 9 acres of vegetated wetlands were created adjacent to the state-funded Queen Bess project by constructing a rock dike and filling the containment area with dredged material from the Barataria Bay Waterway.
Breaux Act	BA-20 (PBA-35)	Jonathan Davis Wetland Protection	HR	2	NRCS	Ullo	Wooton	Jef.	510	2001	$1,383,509	$19,375,618	$8,127,489	$3,398,867	$28,886,616	The goal of this project is to restore the natural hydrologic conditions of the area and reduce shoreline erosion. This is accomplished through a constructed series of water control structures and a rock dike.
Breaux Act	BA-21 (XBA-65a)	Bayou Perot/Bayou Rigolettes Marsh Restoration (Deauthorized)	MC	3	NMFS	Ullo	Wooton	Jef. Laf.	N/A	Deauth.	$14,880	N/A	$6,083	$1,835,047	$20,963	This project was authorized to protect deteriorated intermediate to brackish marsh located between Lake Salvador and Little Lake by using dredged material to re-establish the shoreline. Due to an unstable and rapidly eroding site, the project was deemed unfeasible and was officially deauthorized by the Breaux Act Task Force in January of 1998.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	BA-22 (PBA-34i)	Bayou L'Ours Ridge Hydrologic Restoration (Deauthorized)	HR	4	NRCS	Dupre	Pitre	Laf.	N/A	Deauth.	$265,334	N/A	$105,899	$2,418,676	$371,232	This project was proposed to restore natural hydrologic flow to the marsh by reinforcing breached areas of the Bayou L'Ours Ridge through a series of canal closures and two water control structures. The project was officially deauthorized by the Breaux Act Task Force in April 2003.
Breaux Act	BA-23 (PBA-12a)	Barataria Bay Waterway West Side Shoreline Protection	SP	4	NRCS	Ullo	Wooton	Jef.	232	2000	$284,550	$1,851,223	$877,592	$2,192,418	$3,013,365	This project is intended to reduce erosion of the channel bank and protect exposed marsh from increased water exchange and rapid changes in salinity. The project strategies included armoring the western bank of the Barataria Bay Waterway with approximately 9,400 linear feet of rock material and installation of a water control structure to limit saltwater intrusion into the area.
Breaux Act	BA-24 (XBA-48a)	Myrtle Grove Siphon	FD	5	NMFS	Boasso	Wooton	Plaq.	1,119	Pending	$482,951	N/A	$6,152	$15,525,950	$489,103	The goal of the project is to reduce saltwater intrusion and to nourish existing marsh. This will be accomplished by diverting water through a siphon from the Mississippi River to adjacent wetlands.
Breaux Act	BA-25 (PBA-20)	Bayou Lafourche Siphon (Phase 1)	FD	5	EPA	Dupre	Pitre	Ter. Laf.	N/A	Pending	$1,500,000	N/A	N/A	$24,487,337	$1,500,000	The goal of the project is to reduce marsh loss adjacent to Bayou Lafourche by introducing nutrient and sediment laden river water through large siphon pipes. This project was reauthorized on the 11th PPL as BA-25b.
Breaux Act	BA-25b	Mississippi River Reintroduction Into Bayou Lafourche	FD	11	EPA	Dupre, Ullo, Chaisson	Pitre, Wooton, Triche, Baldone, Dartez	Laf. Asc. Asu.	988	Pending	$9,619,600	N/A	$80,400	$9,700,000	$9,700,000	The goal of the project is to restore and protect the health of marshes in the Barataria and Terrebonne basins through reintroduction of sediment and nutrient laden Mississippi River water via Bayou Lafourche. This project was originally authorized on the 5th PPL as BA-25.
Breaux Act	BA-26 (PBA-12b)	Barataria Bay Waterway East Side Shoreline Protection	SP	6	NRCS	Ullo	Wooton	Orl. Jef.	217	2001	$365,838	$3,560,349	$1,307,290	$5,019,900	$5,224,477	The objective of this project is to rebuild the banks of the Barataria Bay Waterway (BBWW), to protect the adjacent marsh from excessive tidal action, and to prevent saltwater intrusion. The project consists of installing a 17,600 linear-foot rock dike on the east bank of the BBWW.
Breaux Act	BA-27/27b (XBA-63/63ii)	Barataria Basin Landbridge Shoreline Protection, Phases 1 and 2	SP	7 and 8	NRCS	Ullo	Wooton, Pitre	Jef. Laf.	1,304	Pending	$1,826,285	$18,466,944	$1,694,259	$17,515,029	$21,987,488	This project is designed to protect a deteriorated intermediate to brackish marsh located between Lake Salvador and Little Lake by reducing shoreline erosion. Phase 1 and 2 of this project will provide 35,000 linear feet of shoreline protection along Bayous Perot and Rigolettes within the Barataria Basin.
Breaux Act	BA-27c (XBA-63iii)	Barataria Basin Landbridge Shoreline Protection, Phase 3	SP	9	NRCS	Ullo, Dupre	Wooton, Pitre	Jef. Laf.	264	2004*	$1,281,497	$11,496,297	$38,526	$15,204,620	$12,816,320	Phase 3 of this project encompasses approximately 41,000 feet of shoreline protection. Approximately 26,000 feet of protection will be along the west bank of Bayou Perot and the north shore of Little Lake in Lafourche Parish. In Jefferson Parish, about 9,600 feet of the shoreline protection will be along the east bank of Bayou Rigolettes and approximately 2,700 feet along each bank of Harvey Cutoff. *Construction Units 1-3 have been completed.
Breaux Act	BA-27d	Barataria Basin Landbridge Shoreline Protection Phase 4	SP	11	NRCS	Ullo	Wooton	Jef.	256	Pending	$2,903,680	$8,704,760	$6,642,206	$22,787,951	$18,250,646	Phase 4 of this project begins at the intersection of Bayou Rigolettes and Barataria Bay Waterway, and extends about 31,500 feet southward along the east bank of Bayou Rigolettes and ties into the northern limit of Phases 1 and 2.
Breaux Act	BA-28 (XBA-1a-i)	Vegetative Plantings of a Dredged Material Disposal Site on Grand Terre Island	VP	7	NMFS	Ullo	Wooton	Jef.	127	2001	$117,657	$166,521	$209,575	$928,895	$493,753	The goal of this project is to stabilize dredged material sites on the eastern end of Grand Terre Island. This objective was achieved through vegetation plantings and by purchasing grazing rights on the island for the life of the project (20 years).

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	BA-29 (BA-32a)	LA Highway 1 Marsh Creation	MC	9	EPA	Dupre	Pitre	Laf.	472	Pending	$1,409,542	N/A	$23,851	$1,151,484	$1,433,393	The objective of this project is to create marsh habitat in a large open water area adjacent to Louisiana Highway 1 using dredged material from two proposed borrow areas.
Breaux Act	BA-30 (XBA-01a)	East/West Grand Terre Islands Restoration	BI	9	NMFS	Boasso, Ullo	Wooton	Jef.	472	Pending	$2,280,777	N/A	$31,246	$1,856,203	$2,312,023	The goal of this project is to stabilize and benefit 1,575 acres of barrier island habitat and extend the island's life expectancy. Dredged material will be used to create dune and marsh habitat on the eastern and western ends of the island.
Breaux Act	BA-31 (Complex Project)	Delta Building South of Empire	SD	9	USACE	Boasso	Wooton	Plaq.	N/A	Pending	N/A	N/A	N/A	N/A	N/A	The objective of this project is to create marsh in open water areas south of Empire through the diversion and capture of fluvial sediment from the Mississippi River. Ultimately, the project will relay sediment to the barrier shoreline enhancing the ability of these features to regenerate and stabilize.
Breaux Act	BA-32 (Complex Project)	Barrier Island Restoration Grande Terre to SW Pass	BI	9	NMFS	Boasso	Wooton	Plaq	N/A	Pending	N/A	N/A	N/A	N/A	N/A	The objective of this project is to restore 5 to 10 miles of barrier shoreline from Grand Terre to Sandy Point. A combination of sand, hard structures, and alternative materials will be considered. The project will also determine the feasibility of installing wave absorbers as proposed in the Barrier Island Feasibility Study, or similar protection along inland shorelines. This project was reauthorized on the 11th PPL as Pelican Island and Pass La Mer to Chaland Pass Restoration, BA-38.
Breaux Act	BA-33	Delta Building Diversion at Myrtle Grove	SD	10	USACE	Boasso, Ullo	Wooton	Plaq. Jef. Laf.	8,891	Pending	$3,002,114	N/A	N/A	$3,002,114	$3,002,114	The objective of this project is to create marsh in open water areas south of Empire through the diversion and capture of fluvial sediment from the Mississippi River.
Breaux Act	BA-34	Mississippi River Reintroduction Into Northwest Barataria Basin	FD	10	EPA	Amedee, Chaisson	Triche, Quezaire	StJo. Laf.	N/A	Pending	$2,314,925	N/A	$47,762	$1,899,834	$2,362,687	The goal of this project is to restore the natural hydrologic regime and add nutrients to adjacent swamp areas. The project will utilize a freshwater diversion/siphon from the Mississippi River to northwest Barataria Basin wetlands, with gapping of spoil banks and placement of culverts under LA Highway 20.
Breaux Act	BA-35	Pass Chaland to Grand Bayou Pass Barrier Shoreline Restoration	BI	11	NMFS	Boasso	Wooton	Plaq.	161	Pending	$2,320,189	N/A	$24,198	$1,880,700	$2,344,387	This project will prevent the barrier island from breaching through the deposition of dredged material, the creation of tidal creeks and ponds, and vegetation plantings. This will provide a continued barrier to reduce wave and tidal energy, thereby protecting the mainland shoreline from continued erosion.
Breaux Act	BA-36	Dedicated Dredging on the Barataria Basin Landbridge	MC	11	USFWS	Ullo	Wooton	Jef.	564	Pending	$1,971,838	N/A	$22,572	$2,294,410	$1,994,410	This project, in conjunction with the Barataria Basin Landbridge Shoreline Protection project (BA-27, BA-27c), will protect the functional integrity of this critical area of the Barataria Basin. This project will create emergent marsh through the deposition of dredged material into open water areas.
Breaux Act	BA-37	Little Lake Shoreline Protection/ Dedicated Dredging Near Round Lake	SP MC	11	NMFS	Dupre	Pitre	Laf.	713	Pending	$2,021,694	$31,829,321	$139,136	$35,994,929	$33,990,151	This project is designed to protect area wetlands which currently experience high rates of shoreline erosion. This project will protect approximately 21,000 feet of Little Lake shoreline, create 488 acres of intertidal wetlands, and nourish an additional 532 acres of fragmented, subsiding marsh.
Breaux Act	BA-38	Barataria Barrier Island Complex Project: Pelican Island and Pass La Mer to Chaland Pass Restoration	BI	11	NMFS	Boasso	Wooton	Plaq.	322	Pending	$6,975,929	$58,978,833	$537,622	$61,995,587	$66,492,384	The objectives of this project is to create barrier island habitat, enhance storm-related surge and wave protection, prevent overtopping during storms, and increase the volume of sand within the active barrier system. Conceptual project plans envision dedicated dredging of local, near shore sand sources to directly create beach, dune, and wetland habitats.
Breaux Act	BA-39	Mississippi River Sediment Delivery System	MC	12	EPA	Boasso	Wooton	Jef.	400	Pending	$2,693,719	N/A	$37,760	$2,192,735	$2,731,479	The goal of this project is to create/restore 538 acres of brackish marsh by delivering via pipeline, dredged material from the Mississippi River to an adjacent area within the Barataria Basin, and planting marsh vegetation.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	BS-03a (BS-03a)	Caernarvon Diversion Outfall Management	OM	2	NRCS	Boasso	Wooton, Odinet	Plaq.	802	2002	$343,940	$2,309,022	$1,883,038	$2,522,199	$4,536,000	The objective of this project is to promote better utilization of freshwater and nutrients from the Mississippi River via the Caernarvon diversion structure during low-discharge periods. The outfall management project includes installation of flowthrough culverts with water control at 8 sites, 3 plug closures with armor protection, 13,000 feet of spoil bank restoration, and vegetation plantings where applicable.
Breaux Act	BS-04a (BS-04a)	White's Ditch Outfall Management (Deauthorized)	OM	3	NRCS	Boasso	Wooton	Plaq.	N/A	Deauth.	$25,341	N/A	$7,521	$756,134	$32,862	This project was designed to direct the flow of Mississippi River nutrients and sediment into the deteriorating wetlands in the Breton Sound Basin that are not directly benefited by the Caernarvon Freshwater Diversion project. Because of the failure to secure landrights, the project was officially deauthorized by the Breaux Act Task Force in January of 1998.
Breaux Act	BS-07 (PBS-06)	Grand Bay Crevasse (Deauthorized)	SD	4	USACE	Boasso	Wooton	Plaq.	N/A	Deauth.	$62,437	N/A	$3,310	$2,468,908	$65,747	Project goals included construction of a rock-lined opening through the rocks at the head of the Jurjevich Canal to establish a pathway for freshwater and sediment into Grand Bay and the adjacent marshes to create, restore, and enhance wetlands in the area. The project was officially deauthorized by the Breaux Act Task Force in July of 1998.
Breaux Act	BS-09 (PBS-1)	Upper Oak River Freshwater Siphon, Phase 1 (Deauthorized)	FD	8	NRCS	Boasso	Wooton	Plaq.	0	Deauth.	$56,476	N/A	N/A	$2,500,239	$56,476	The primary goal of this project was to reverse the trend of interior marsh deterioration in the project area due to saltwater intrusion, through installation of a freshwater siphon and outfall channel. These strategies would have provided freshwater, nutrients, and sediment to enhance marsh health. The project was officially deauthorized by the Breaux Act Task Force in January of 2003.
Breaux Act	BS-10	Delta Building Diversion North of Fort St. Philip	SD	10	USACE	Boasso	Wooton	Plaq.	2,473	Pending	$1,140,021	N/A	$15,179	$1,155,200	$1,155,200	This project is intended to reduce the loss of existing marsh in the 2,252-acre project area and enhance the integrity of the delta system. Project strategies included dredging a series of channel armor gaps that will be strategically located along the east descending bank of the Mississippi River in the vicinity of Fort St. Philip to divert sediment and nutrients to adjacent wetlands.
Breaux Act	BS-11	Delta Management at Fort St. Philip	SD	10	USFWS	Boasso	Wooton	Plaq.	267	Pending	$337,344	$1,622,918	$92,954	$3,183,938	$2,053,216	The objective of the project is to enhance the delta-building process occurring as a result of the crevasse at Fort St. Philip. Six additional artificial crevasses will be constructed to divert freshwater and sediment into areas currently restricted by spoil banks or natural ridges. In addition, linear vegetated terraces will be constructed to enhance sediment retention and reduce wave energy in one of the large receiving bays.
Breaux Act	MR-03 (FMR-03)	West Bay Sediment Diversion	SD	1	USACE	Boasso	Wooton	Plaq.	9,831	2003	$1,668,432	$4,607,552	$16,339,854	$8,517,066	$22,615,838	The objective of the project is to restore vegetated wetlands in the West Bay area that is currently shallow open water. A diversion channel was constructed in two phases: (1) initial construction of an interim channel to accommodate a discharge of 20,000 cubic feet per second (cfs) at the 50% duration stages in the Mississippi River and marsh development areas and (2) modification of the interim diversion channel design to accommodate a full-scale diversion of 50,000 cubic feet per second at the 50% duration stage.
Breaux Act	MR-06 (XMR-10)	Channel Armor Gap Crevasse	SD	3	USACE	Boasso	Wooton	Plaq.	936	1997	$253,486	$241,720	$393,778	$808,397	$888,985	The implementation of this project is intended to restore vegetated wetlands by increasing freshwater and sediment from the Mississippi River to the Delta National Wildlife Refuge area. The project consisted of deepening the existing 150-foot wide gap in the Mississippi River channel bank armor and adding 125,000 cubic yards of material from the outfall channel to the adjacent marsh.

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Breaux Act	MR-07 (MR-8/9)	Pass-a-Loutre Crevasse (Deauthorized)	SD	3	USACE	Boasso	Wooton	Plaq.	N/A	Deauth.	$108,114	N/A	$11,721	$2,857,790	$119,835	Marsh creation and restoration was the objective of this project. This was to be accomplished through construction of a crevasse on the left descending bank of the Mississippi River between Pass-a-Loutre and Raphael Pass. The project was officially deauthorized by the Breaux Act Task Force in July of 1998 due to high costs attributed to relocating underground utilities in the area.
Breaux Act	MR-08 (XMR-12)	Beneficial Use of Hopper Dredged Material Demonstration (Deauthorized)	DM	4	USACE	Boasso	Wooton	Plaq.	N/A	Deauth.	$48,719	N/A	$9,591	$300,000	$58,310	The goal of this project was to construct a crevasse to allow sediment to enter near the mouth of the pass and be deposited in the shallow open water area between Pass-a-Loutre and Raphael Pass to create new emergent marsh. Due to design problems, the project was officially deauthorized by the Breaux Act Task Force in November of 2000.
Breaux Act	MR-09a (PMR-10)	Delta Wide Crevasses	SD	6	NMFS	Boasso	Wooton	Plaq.	2,386	1999	$278,034	$471,360	$3,983,259	$5,473,934	$4,732,653	The objective of this project is to promote the formation of emergent freshwater and intermediate marsh in shallow, open water areas of the Pass-a-Loutre Wildlife Management Area and the Delta National Wildlife Refuge by either cleaning existing splays or creating new ones.
Breaux Act	MR-10 (XMR-12b)	Dustpan Maintenance Dredging Operations for Marsh Creation in the Mississippi River Delta Demonstration	DM	6	USACE	Boasso	Wooton	Plaq.	N/A	2002	$135,876	$1,729,611	$46,000	$1,600,000	$1,911,487	This project was intended to demonstrate the beneficial use of dredged material from routine maintenance of the Mississippi River Navigation Channel by using a dustpan hydraulic dredge to create and restore adjacent marsh. Approximately 40 acres of deteriorated marsh that had converted to shallow open water was restored with approximately 222,000 cubic yards of dredged material.
Breaux Act	MR-11 (MR-DEMO)	Introduction of Sediment and Nutrients at Selected Diversion Sites Demonstration	FD	9	USACE	Boasso	Wooton	Plaq.	N/A	Pending	$93,515	$1,340,730	$68,572	$1,502,817	$1,502,817	The demonstration project is intended to show the effectiveness of using a hydraulic pipeline dredge to provide increased sediment through a diversion structure or siphon. Monitoring of the project will determine not only the characteristics of the sediment input concentrations, but also the subsequent effects in the outfall area.
Breaux Act	MR-12	Mississippi River Sediment Trap	SNT	12	EPA	Boasso	Wooton	Plaq.	24,065	Pending	$1,047,083	N/A	$29,245	$1,880,376	$1,880,376	This project was reauthorized on the 12th PPL to create emergent wetlands through the beneficial use of material dredged from a sediment trap located between miles 5 and 1 above Head of Passes in the Mississippi River. The proposed sediment trap would consist of an area dredged out of the riverbed that would force sediment deposition.
Breaux Act	MR-13	Benneys Bay Sediment Diversion	SD	10	USACE	Boasso	Wooton	Plaq.	5,828	Pending	$1,047,083	N/A	$29,245	$1,076,328	$1,076,328	The objective of the project is to create vegetated wetlands in shallow open water areas in Benneys Bay. The project would divert sediment in an effort to create, nourish, and maintain approximately 5,828 acres of fresh to intermediate marsh over the 20-year project life.
Breaux Act	MR-14	Spanish Pass Diversion	SD	13	USACE	Boasso	Wooton	Plaq.	433	Pending	$1,137,344	N/A	N/A	$1,137,344	$1,137,344	The goal of this project is to create emergent marsh, to the maximum extent practicable, by diverting Mississippi River water and sediment from Grand Pass into open water receiving areas.
State	BA-03	Naomi Diversion	FD	N/A	N/A	Boasso, Ullo	Wooton	Jef. Plaq.	1,318	1992	N/A	N/A	N/A	N/A	$6,666,667	This project involves the construction of eight parallel siphons to divert water from the Mississippi River, over the levee, and into the adjacent wetlands near Naomi, Louisiana. The maximum discharge of the siphons is 2,100 cubic feet per second, which will potentially deliver up to 150,000 cubic yards of river sediment into the wetlands annually.
State	BA-04	West Pointe a la Hache	FD	N/A	N/A	Boasso	Wooton	Plaq.	718	1992	N/A	N/A	N/A	N/A	$6,081,800	This project involves the construction of eight parallel siphons to divert water from the Mississippi River, over the levee, and into the adjacent wetlands on the west side of the river near Pointe a la Hache, Louisiana. The maximum discharge of the siphons is 2,100 cubic feet per second, which will potentially deliver up to 150,000 cubic yards of river sediment into the wetlands annually.

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State	BA-05b	Queen Bess	DM	N/A	N/A	Ullo	Wooton	Jef.	15	1990	N/A	N/A	N/A	N/A	$161,250	The purpose of this project is to restore Queen Bess Island as a brown pelican (*Pelecanus occidentalis*) rookery. Dredged material was added to the island to increase its size in 1991, and a rock dike was installed around the perimeter of the original island in 1992 to armor the shoreline. Pelican nests continue to increase and the area has become vegetated.
State	BA-05c	Baie de Chactas	SP	N/A	N/A	Chaisson	Smith	StC.	130	1990	N/A	N/A	N/A	N/A	$175,000	Approximately 300,000 pounds of crushed oyster shell were placed on 7,400 feet of shoreline to restore the physical integrity of the marsh shoreline separating Lake Salvador and Baie de Chactas and Baie du Cabanage.
State	BA-16	Bayou Segnette	SP	N/A	N/A	Ullo	Wooton	Jef.	88	1994, 1998	N/A	N/A	N/A	N/A	$1,373,151	This project armored and re-defined approximately 6,800 linear feet of shoreline separating Bayou Segnette from Lake Salvador. Additional CWPPRA funds were appropriated for the design of this state-funded project. Maintenance of this project was necessary in the 1998-1999 fiscal year at a cost of $300,000.
State	BS-06	Lake Lery Hydrologic Restoration	FD	N/A	N/A	Boasso	Odinet	StB.	100	1997	N/A	N/A	N/A	N/A	$1,000,000	This project involved the construction of a pumping station located along the south-central edge of the St. Bernard Parish Ridge. This will discharge collected rainfall into the marsh north of Lake Lery and help prevent saltwater intrusion. The project was built in partnership with the Lake Borgne Basin Levee District and was completed in May of 1997.
State		Grand Isle Bay Side Breakwaters	SP	N/A	N/A	Ullo	Pitre, Wooton	Jef.	5	1995	N/A	N/A	N/A	N/A	$500,000	The purpose of this project was to reduce erosion on the bay side of Grand Isle. Fifteen 300-foot breakwaters were constructed on the back-bay side of Grand Isle.
State		North Grand Isle Breakwaters	SP	N/A	N/A	Ullo	Pitre	Jef.	50	1995	N/A	N/A	N/A	N/A	$160,000	of Grand Isle to protect camps located between Caminada Bay and the west side of Louisiana Hwy 1. The Louisiana Department of Natural Resources contributed no construction funds, and was involved in construction inspection only. The local Levee District supplied construction funds. Construction was completed in June
State	MR-01	Small Sediment Diversions (10 projects)	SD	N/A	N/A	Boasso	Wooton	Plaq.	6,719	1986, 1991	N/A	N/A	N/A	N/A	$1,010,500	These projects, including MR-01, involve the construction of three new crevasses constructed in the 1986-1987 fiscal year at South Pass, Loomis Pass, and Pass-a-Loutre; four new crevasses constructed as Pass-a-Loutre (1, 2, 3a, and 3b) in 1990-1991, and; three new crevasses created in South Pass (2, 3, and 4) in 1990-1991.
PCWRP		Goose Bayou	SP	N/A	N/A	Boasso	Wooton	Jef.	23	1991	N/A	N/A	N/A	N/A	$324,500	The brush fences were constructed to protect the shoreline and promote sediment accretion and vegetation growth at the shoreline. This project includes others at Bayou Cypress, Bayou LeFleur, and Bayou La Tour. Fences were originally constructed and filled in 1991 and maintenance was performed in 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, and 2001.
PCWRP		Leeville #1	SP	N/A	N/A	Romero	Pitre	Laf.	2	1991	N/A	N/A	N/A	N/A	$74,438	Brush fences were built in 1991 to promote sediment accretion along a canal adjacent to Louisiana Hwy 1 in Leeville, Louisiana, and maintenance was performed in 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2003.
PCWRP		Fourchon	SP	N/A	N/A	Dupre	Pitre	Laf.	2	1991	N/A	N/A	N/A	N/A	$86,938	Brush fences were built in 1991 along a canal to prevent shoreline erosion, and maintenance was performed in 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, and 2003.
PCWRP		Eighty Arpent Canal	SP	N/A	N/A	Boasso	Odinet	StB.	7	1991, 1992	N/A	N/A	N/A	N/A	$56,989	Brush fences were constructed in 1991 and 1992 along Eighty Arpent Canal to promote sediment accumulation and minimize erosion along the shoreline. The fences were maintained in 1997.
PCWRP		Bayou Lafourche	SP	N/A	N/A	Dupre	Pitre	Laf.	1	1996	N/A	N/A	N/A	N/A	$22,500	Wave damping fences were constructed along Bayou Lafourche to minimize shoreline erosion from boat-induced waves. Fences were originally constructed and filled in 1996 and maintenance was performed in 1997, 2000, 2001, 2003 and 2004.

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PCWRP		Whiskey Canal	SP	N/A	N/A	Ullo	Alario	Jef.	2	1997	N/A	N/A	N/A	N/A	$18,000	Whiskey Canal is located north of Lake Cataouatche in Jefferson Parish. The brush fences were constructed to prevent erosion at the intersection of two canals.
PCWRP		Bayou Bienvenue	SP	N/A	N/A	Dean	Odinet	StB.	1	2001	N/A	N/A	N/A	N/A	$18,000	The construction of brush fences will slow water movement, trap sediment, and protect vegetation along Bayou Bienvenue.
PCWRP		Bayou Segnette	SP	N/A	N/A	Ullo	Wooton	Jef.	1	2001	N/A	N/A	N/A	N/A	$33,000	Approximately 45,000 Christmas trees were placed in an area between Bayou Segnette and Lake Salvador in order to slow water flow and provide additional wildlife and fisheries habitat.
PCWRP		Bayou Gauche	SP	N/A	N/A	Chaisson	Smith	StC.	2	2001	N/A	N/A	N/A	N/A	$45,000	Approximately 50 feet of brush fence were constructed along Bayou Gauche, near the intersection of Grand Bayou and Simoneaux Ponds, in order to slow water exchange and reduce shoreline erosion. Maintenance was performed in 2003 and 2004.
PCWRP		Catfish Lake	SP	N/A	N/A	Dupre	Pitre	Laf.	1	2001	N/A	N/A	N/A	N/A	$31,000	Approximately 400 feet of brush fencing were constructed along the bank of Catfish Lake, just west of Golden Meadow, in order to stabilize that particular section of the hurricane protection levee. Maintenance was performed in 2003 and 2004.
Vegetation		Salvador WMA	VP	N/A	N/A	Ullo	Wooton	StC.	7	1988	N/A	N/A	N/A	N/A	$46,460	A total of 900 smooth cordgrass (*Spartina alterniflora*) plants, 900 cattail (*Typha latifolia*) plants, and 900 California bulrush (*Schoenoplectus californicus*) plants were used to stabilize the bank behind newly constructed wave-damping devices.
Vegetation		Clovelly	VP	N/A	N/A	Dupre	Pitre	Laf.	111	1988	N/A	N/A	N/A	N/A	$21,626	A total of 24,000 smooth cordgrass (*Spartina alterniflora*) plants were used along 48,000 linear feet of shoreline to minimize shoreline erosion.
Vegetation		Kings Ridge	VP	N/A	N/A	Dupre	Pitre	Laf.	1	1989, 1990, 1991, 1994, 2001	N/A	N/A	N/A	N/A	$52,604	A total of 1,345 smooth cordgrass (*Spartina alterniflora*) plants were used to provide a living natural barrier for protection against wave-induced shoreline erosion.
Vegetation		Queen Bess Island	VP	N/A	N/A	Ullo	Wooton	Jef.	9	1991, 1993, 1997, 2000	N/A	N/A	N/A	N/A	$10,970	A total of 688 smooth cordgrass (*Spartina alterniflora*) plants and 930 black mangrove (*Avicennia germinans*) trees were used on the island to provide soil stability on the edges of the soil disposal area and to enhance wildlife habitat.
Vegetation		Bayou LaTour	VP	N/A	N/A	Ullo	Wooton	StC.	24	1991	N/A	N/A	N/A	N/A	$29,804	A total of 10,550 smooth cordgrass (*Spartina alterniflora*) plants were used in a single row on 1-foot centers to stabilize the bank behind newly constructed wave damping devices.
Vegetation		Myrtle Grove	VP	N/A	N/A	Boasso	Wooton	Plaq.	48	1991, 1996, 2001	N/A	N/A	N/A	N/A	$53,558	A total of 14,390 smooth cordgrass (*Spartina alterniflora*) plants and 1,340 marshhay cordgrass (*Spartina patens*) plants were used to vegetate an area on the uppermost part of a protection levee.
Vegetation		Red Pass/ Spanish Pass	VP	N/A	N/A	Boasso	Wooton	Plaq.	21	1991, 1996	N/A	N/A	N/A	N/A	$19,820	California bulrush (*Schoenoplectus californicus*), smooth cordgrass (*Spartina alterniflora*), giant cutgrass (*Zizaniopsis miliacea*), and baldcypress (*Taxodium distichum*) seedlings were used on these islands to provide diverse habitat for wildlife and to form a vegetation buffer along several deteriorating islands.
Vegetation		Bay L' Ours	VP	N/A	N/A	Dupre	Pitre	Laf.	46	1991	N/A	N/A	N/A	N/A	$28,250	A total of 10,000 smooth cordgrass (*Spartina alterniflora*) plants were used to provide stabilization behind a recently constructed wave damping device.

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Vegetation		Goose Bayou	VP	N/A	N/A	Ullo	Wooton	Jef.	28	1992	N/A	N/A	N/A	N/A	$20,340	Approximately 4,000 smooth cordgrass (*Spartina alterniflora*) plants were used behind sediment fences and Christmas tree fences along Bayou LaTour to help stabilize new sediment.
Vegetation		Lake Salvador	VP	N/A	N/A	Chaisson, Dupre	Smith, Wooton	Laf.	11	1992, 1999	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 giant cutgrass (*Zizaniopsis miliacea*) were planted to establish vegetation along a section of eroded coast.
Vegetation		Temple Bay	VP	N/A	N/A	Chaisson	Wooton	Laf.	9	1992	N/A	N/A	N/A	N/A	$5,424	A total of 800 smooth cordgrass (*Spartina alterniflora*) plants were used to stabilize a spoil bank behind a wave-reduction fence.
Vegetation		Bayou DuPont	VP	N/A	N/A	Ullo, Boasso	Wooton	Plaq.	20	1992, 1998, 1999	N/A	N/A	N/A	N/A	$14,526	A total of 2,022 smooth cordgrass (*Spartina alterniflora*) plants, 800 California bulrush (*Schoenoplectus californicus*) plants, and 500 giant cutgrass (*Zizaniopsis miliacea*) plants were used along the shoreline to stabilize the bank of Bayou DuPont .
Vegetation		Round Lake	VP	N/A	N/A	Boasso	Wooton	Plaq.	4	1992	N/A	N/A	N/A	N/A	$4,435	A total of 250 seashore paspalum (*Paspalum vaginatum*) plants and 1,320 smooth cordgrass (*Spartina alterniflora*) plants were used to prevent erosion along the shoreline of Round Lake.
Vegetation		Yellow Cotton Bay	VP	N/A	N/A	Boasso	Wooton	Plaq.	6	1992	N/A	N/A	N/A	N/A	$6,144	A total of 1,875 smooth cordgrass (*Spartina alterniflora*) plants and 300 seashore paspalum (*Paspalum vaginatum*) plants were used to stabilize the shoreline of a pipeline canal that runs east to west.
Vegetation		Lake Hermitage	VP	N/A	N/A	Boasso	Wooton	Plaq.	2	1993	N/A	N/A	N/A	N/A	$1,068	A total of 110 seashore paspalum (*Paspalum vaginatum*) plants and 100 smooth cordgrass (*Spartina alterniflora*) plants were used to plant vegetation behind a wave reduction fence for ground stabilization.
Vegetation		Lake Lery/ Eighty Arpent Canal	VP	N/A	N/A	Boasso	Odinet	StB.	11	1993, 1998	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 smooth cordgrass (*Spartina alterniflora*) plants were used to block openings to small lagoons and provide a protective barrier along the Eighty Arpent Canal.
Vegetation		Lake Laurier	VP	N/A	N/A	Boasso	Wooton	Plaq.	2	1993	N/A	N/A	N/A	N/A	$1,068	A total of 110 seashore paspalum (*Paspalum vaginatum*) plants and 100 smooth cordgrass (*Spartina alterniflora*) plants were used behind a wave-reduction fence to help stabilize sediment.
Vegetation		Little Lake Hunting Club	VP	N/A	N/A	Ullo	Wooton	Jef.	165	1994, 1996	N/A	N/A	N/A	N/A	$134,244	A total of 2,400 smooth cordgrass (*Spartina alterniflora*) plants, 12,000 marshhay cordgrass *(Spartina patens*) plants, and 12,000 gulf cordgrass plants (*Spartina spartinae*) were used to stabilize the levee and protect the shoreline at the base of the levee.
Vegetation		West Pointe a la Hache	VP	N/A	N/A	Boasso	Wooton	Plaq.	6	1994	N/A	N/A	N/A	N/A	$3,526	A total of 400 smooth cordgrass (*Spartina alterniflora*) plants and 120 California bulrush (*Schoenoplectus californicus*) plants were used to reduce the effects of wave energy on several deteriorating spoil banks in a brackish marsh, to trap sediment in the same area, and to establish freshwater vegetation in the immediate outfall area of the West Pointe a la Hache freshwater siphon.
Vegetation		LaReussite	VP	N/A	N/A	Boasso	Wooton	Plaq.	3	1994	N/A	N/A	N/A	N/A	$1,695	A total of 250 smooth cordgrass (*Spartina alterniflora*) plants were used to establish marsh vegetation and trap sediment in the marsh receiving the outfall from the LaReussite freshwater siphon.

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Vegetation		Fourchon	VP	N/A	N/A	Dupre	Pitre	Laf.	29	1995	N/A	N/A	N/A	N/A	$14,408	A total of 1,250 smooth cordgrass (*Spartina alterniflora*) plants and 1,500 black mangrove (*Avicennia germinans*) trees were used to protect and stabilize mud flats, protect the shoreline from erosion by high energy tidal currents, and improve wildlife habitat diversity.
Vegetation		Bayou Lafourche Shore	VP	N/A	N/A	Dupre	Pitre	Laf.	37	1995	N/A	N/A	N/A	N/A	$21,696	A total of 3,200 giant cutgrass (*Zizaniopsis miliacea*) plants were used along the shoreline of Bayou Lafourche to provide a living barrier against wave-induced shoreline erosion.
Vegetation		Big Mar	VP	N/A	N/A	Boasso	Wooton	Plaq.	21	1995, 1998	N/A	N/A	N/A	N/A	$7,458	A total of 500 California bulrush (*Schoenoplectus californicus*) plants and 600 giant cutgrass (*Zizaniopsis miliacea*) plants were used to establish emergent freshwater vegetation in the immediate outfall area of the Caernarvon Freshwater Diversion project.
Vegetation		Scarsdale	VP	N/A	N/A	Boasso	Wooton	Plaq.	30	1995, 1998	N/A	N/A	N/A	N/A	$8,475	A total of 1,000 baldcypress (*Taxodium distichum*) trees and 500 California bulrush (*Schoenoplectus californicus*) plants were used to re-introduce vegetation that was historically known to occur in this area.
Vegetation		Belair	VP	N/A	N/A	Boasso	Wooton	Plaq.	7	1995	N/A	N/A	N/A	N/A	$3,390	A total of 500 smooth cordgrass (*Spartina alterniflora*) plants were used to vegetate a low canal levee for protection against wave-induced shoreline erosion.
Vegetation		New Canal	VP	N/A	N/A	Dupre	Baldone	Laf.	1	1996	N/A	N/A	N/A	N/A	$320	Approximately 40 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to reduce wake-induced shoreline erosion along a canal bank.
Vegetation		Lake Chenier	VP	N/A	N/A	Dupre	Baldone	Laf.	75	1996	N/A	N/A	N/A	N/A	$52,160	Smooth cordgrass (*Spartina alterniflora*) was planted to reduce shoreline erosion along two oilfield canals in the vicinity of Lake Cheniere.
Vegetation		Clovelly Farm	VP	N/A	N/A	Dupre	Pitre	Laf.	1	1996	N/A	N/A	N/A	N/A	$814	A total of 120 California bulrush (*Schoenoplectus californicus*) plants were used to absorb boat-generated wave energy and provide a seed source for re-vegetation
Vegetation		Queen Bess Island	VP	N/A	N/A	Ullo	Wooton	Jef.	5	1997	N/A	N/A	N/A	N/A	$2,967	Approximately 430 stems of black mangrove (*Avicennia germinans*) and 688 stems of smooth cordgrass (*Spartina alterniflora*) were planted to stabilize local sediment.
Vegetation		Bayou Segnette	VP	N/A	N/A	Ullo	Damico	Jef.	9	1997	N/A	N/A	N/A	N/A	$5,085	A total of 375 California bulrush (*Schoenoplectus californicus*) plants and 375 giant cutgrass (*Zizaniopsis miliacea*) plants were used to protect a levee on Bayou Segnette from wave-induced erosion.
Vegetation		Simoneaux Ponds	VP	N/A	N/A	Chaisson	Smith	StC.	20	1997, 2000, 2002	N/A	N/A	N/A	N/A	$11,526	A total of 1,700 California bulrush (*Schoenoplectus californicus*) plants were used in open bodies of water to reduce fetch and to reduce the rate of shoreline erosion.
Vegetation		Lake Lery Shoreline	VP	N/A	N/A	Boasso	Odinet	StB.	23	1997, 1998	N/A	N/A	N/A	N/A	$13,560	A total of 1,000 California bulrush (*Schoenoplectus californicus*) plants and 1,000 giant cutgrass (*Zizaniopsis miliacea*) plants were used along the Lake Lery shoreline to reduce shoreline erosion and vegetate predominately bare silt deposits.
Vegetation		Sebastopol Canal	VP	N/A	N/A	Boasso	Odinet	StB.	2	1997	N/A	N/A	N/A	N/A	$1,017	A total of 150 California bulrush (*Schoenoplectus californicus*) plants were used to prevent erosion along Sebastopol Canal.

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Vegetation		Cane Ridge Slough	VP	N/A	N/A	Boasso	Wooton	Plaq.	8	1997	N/A	N/A	N/A	N/A	$4,746	A total of 700 California bulrush (*Schoenoplectus californicus*) plants were used along a deteriorating canal bank to prevent boat-wake induced erosion from causing breaches into an adjacent interior marsh.
Vegetation		Delacroix Corp.	VP	N/A	N/A	Boasso	Wooton	Plaq.	11	1997	N/A	N/A	N/A	N/A	$6,780	A total of 500 California bulrush (*Schoenoplectus californicus*) plants and 500 giant cutgrass (*Zizaniopsis miliacea*) plants were used to provide a buffer along areas of the Delacroix Canal in Plaquemines Parish, where boat traffic is causing the banks to erode into the adjacent marsh.
Vegetation		Bayou des Allemands	VP	N/A	N/A	Chaisson	Smith	StC.	15	1998, 2000	N/A	N/A	N/A	N/A	$8,814	A total of 150 California bulrush (*Schoenoplectus californicus*) plants and 150 giant cutgrass (*Zizaniopsis miliacea*) plants were used on approximately 1,500 feet of shoreline to prevent shoreline erosion.
Vegetation		Elmers Island	VP	N/A	N/A	Ullo	Pitre	Jef.	15	1998, 2001	N/A	N/A	N/A	N/A	$18,358	After the construction of sand fences for dune building purposes, a total of 300 marshhay cordgrass (*Spartina patens*) plants and 1,015 bitter panicum (*Panicum amarum*) plants were used around the fence to prevent the new sand from being eroded by winds.
Vegetation		La Branche	VP	N/A	N/A	Chaisson	Smith	StC.	14	1998	N/A	N/A	N/A	N/A	$9,600	A total of 1,200 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted on a spoil site located in the interior marsh area. The establishment of the plants will provide stability in case of damage to the surrounding levee.
Vegetation		Port Fourchon '98	VP	N/A	N/A	Dupre	Pitre	Laf.	23	1998	N/A	N/A	N/A	N/A	$13,560	A total of 1,000 bitter panicum (*Panicum amarum*) plants were used to stabilize sand dunes that were created by newly constructed sand-trapping fence segments.
Vegetation		Bay Joe Wise	VP	N/A	N/A	Boasso	Wooton	Plaq.	9	1998	N/A	N/A	N/A	N/A	$2,712	A total of 400 nursery-grown black mangrove (*Avicennia germinans*) trees were planted to provide habitat for various bird species.
Vegetation		La Branche I	VP	N/A	N/A	Chaisson	Ansardi	StC.	11	1999	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to enhance the productivity and wildlife habitat of the La Branche marsh area.
Vegetation		Clovelly Levee	VP	N/A	N/A	Dupre	Pitre	Laf.	34	1999	N/A	N/A	N/A	N/A	$20,340	A total of 3,000 giant cutgrass (*Zizaniopsis miliacea*) plants were used to provide a vegetation buffer along a hurricane protection levee which has eroded due to boat traffic.
Vegetation		Delacroix '99	VP	N/A	N/A	Boasso	Wooton	Plaq.	14	1999	N/A	N/A	N/A	N/A	$8,475	A total of 1,250 giant cutgrass (*Zizaniopsis miliacea*) plants were used along areas of the Delacroix Canal to create a vegetative buffer and decrease shoreline erosion due to boat traffic.
Vegetation		Ollie Canal Pump-off	VP	N/A	N/A	Boasso	Wooton	Plaq.	14	1999	N/A	N/A	N/A	N/A	$8,475	California bulrush (*Schoenoplectus californicus*) plants were used in an old pump-off in order to re-vegetate the area and decrease flooding.
Vegetation		Grand Isle	VP	N/A	N/A	Ullo	Pitre	Jef.	7	2000, 2001	N/A	N/A	N/A	N/A	$6,000	Approximately 1,000 four inch containers of bitter panicum (*Panicum amarum*) were planted to create a vegetative buffer along a sand trapping fence.
Vegetation		Burchell Canal	VP	N/A	N/A	Chaisson	Smith	StC.	2	2000	N/A	N/A	N/A	N/A	$1,356	A total of 100 California bulrush (*Schoenoplectus californicus*) plants and 100 giant cutgrass (*Zizaniopsis miliacea*) plants were used to create a vegetation buffer on the canal bank and to reduce the erosion caused by both wind-generated wave energy and frequent boat traffic. This bank separates the canal from the Simoneaux Ponds.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Vegetation		Bayou Bardeaux	VP	N/A	N/A	Ullo	Wooton	Jeff.	5	2000	N/A	N/A	N/A	N/A	$1,600	A total of 200 trade gallon containers of California bulrush (*Schoenoplectus californicus*) and giant cutgrass (*Zizaniopsis miliacea*) were planted to create a vegetative buffer on the bayou bank to reduce erosion caused by wave energy and boat traffic.
Vegetation		La Branche II	VP	N/A	N/A	Chaisson	Smith	StC.	23	2000	N/A	N/A	N/A	N/A	$16,000	Approximately 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted in the interior marsh to enhance productivity and improve wildlife habitat.
Vegetation		Port Sulphur	VP	N/A	N/A	Boasso	Wooton	Plaq.	9	2000	N/A	N/A	N/A	N/A	$5,424	A total of 800 black mangrove (*Avicennia germinans*) trees were planted to provide cover for nesting bird populations.
Vegetation		Reggio Canal	VP	N/A	N/A	Boasso	Wooton	Plaq.	21	2000	N/A	N/A	N/A	N/A	$12,204	A total of 1,000 giant cutgrass (*Zizaniopsis miliacea*) plants and 800 California bulrush (*Schoenoplectus californicus*) plants were used on the canal bank to reduce the erosion caused by both boat traffic and wind-generated wave energy.
Vegetation		Bayou Mandeville	VP	N/A	N/A	Boasso	Wooton	Plaq.	16	2001	N/A	N/A	N/A	N/A	$9,993	A total of 1,400 giant cutgrass (*Zizaniopsis miliacea*) plants were placed along Bayou Mandeville, between Big Mar and Lake Lery, to protect a newly created spoil bank from shoreline erosion.
Vegetation		Barataria Bay Waterway Pump-in	VP	N/A	N/A	Ullo	Wooton	Jef.	11	2001	N/A	N/A	N/A	N/A	$9,058	A total of 2,571 smooth cordgrass (*Spartina alterniflora*) plants were placed to introduce additional vegetation in a wetland adjacent to the Barataria Bay Waterway, approximately 3 miles south of Lafitte.
Vegetation		East Golden Meadow	VP	N/A	N/A	Dupre	Pitre	Laf.	23	2001	N/A	N/A	N/A	N/A	$16,048	A total of 2,000 smooth cordgrass (*Spartina alterniflora*) plants were placed south of the Bayou L'Ours Ridge to protect the shoreline against wind and boat-generated wave energy.
Vegetation		Deer Range Canal	VP	N/A	N/A	Boasso	Wooton	Plaq.	17	2001	N/A	N/A	N/A	N/A	$7,558	A total of 5,257 smooth cordgrass (*Spartina alterniflora*) plants were placed to decrease the rate of erosion on a section of Deer Range Canal, located east of Lake Laurier.
Vegetation		Barataria Bay Waterway	VP	N/A	N/A	Ullo	Wooton	Jef.	N/A	2001	N/A	N/A	N/A	N/A	$5,000	A total of 1,000 California bulrush (*Schoenoplectus californicus*) plants were placed on the shoreline of Barataria Bay Waterway, just south of Lafitte near Bayou Dupre, to re-establish vegetation and facilitate marsh growth in an area that has experienced a high rate of subsidence.
Vegetation		Queen Bess Marsh Restoration	VP	N/A	N/A	Ullo	Wooton	Jef.	11	2002	N/A	N/A	N/A	N/A	$8,000	This interior marsh planting used 2,000 bare root plugs of smooth cordgrass (*Spartina alterniflora*) to re-establish vegetation after a dieback in 2000; 5,000 linear feet of interior marsh were planted.
Vegetation		Grand Isle Demo	VP	N/A	N/A	Ullo	Wooton	Jef.	7	2002	N/A	N/A	N/A	N/A	$6,000	This beach planting used 1,000 four-inch containers of bitter panicum (*Panicum amarum*) to create a vegetative mat to hold and collect sand on the beach; 3,000 linear feet were planted.
Vegetation		Barataria Land Bridge CU #2	VP	N/A	N/A	Ullo	Wooton	Jef.	6	2002	N/A	N/A	N/A	N/A	$4,000	Approximately 500 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation in an open marsh area that was exposed to high wave action.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Vegetation		Jonathan Davis Demo	VP	N/A	N/A	Ullo	Wooton	Jef.	1	2002	N/A	N/A	N/A	N/A	$4,500	This demonstration project used 500 feet of coconut fiber logs vegetated with 500 giant cutgrass bare root plugs (*Zizaniopsis miliacea*) to re-create some of the land that at one time separated Bayou Perot and Bayou Rigolettes; 750 linear feet of interior marsh were planted.
Vegetation		Bayou Mandeville	VP	N/A	N/A	Boasso	Wooton	Plaq.	16	2002	N/A	N/A	N/A	N/A	$11,200	This canal bank planting used 1,400 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) to vegetate a newly created spoil bank along Bayou Mandeville; 7,000 linear feet of canal bank were planted.
Vegetation		Reggio 2002	VP	N/A	N/A	Boasso	Wooton	Plaq.	14	2002	N/A	N/A	N/A	N/A	$9,600	This canal bank planting used 1,200 trade gallon containers of California bulrush (*Schoenoplectus californicus*) to establish vegetation along the canal bank that was dredged in the summer of 2001; 6,000 linear feet of canal bank were planted.
Vegetation		Pelican Island	VP	N/A	N/A	Boasso	Wooton	Plaq.	8	2003	N/A	N/A	N/A	N/A	$6,400	A total of 800 containers of bitter panicum (*Panicum amarum*) and 200 units of sea oats (*Uniola paniculata*) were planted to stabilize the sandy areas of Pelican Island and aid in the collection of new sand deposits.
Vegetation		Shell Island Bay	VP	N/A	N/A	Boasso	Wooton	Plaq.	18	2003	N/A	N/A	N/A	N/A	$4,800	A total of 800 black mangroves (*Avicennia germinans*) were planted on Shell Island to enhance wildlife habitat and stabilize soils.
Vegetation		Bayou L'Ours Embankment Enhancement	VP	N/A	N/A	Boasso	Pitre	Laf.	11	2003	N/A	N/A	N/A	N/A	$15,360	A total of 1,920 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation along a canal bank.
Vegetation		North Little Lake/South Bayou Perot Demo	VP	N/A	N/A	Dupre	Pitre	Laf.	12	2003	N/A	N/A	N/A	N/A	$9,500	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) and 300-feet of coconut fiber mats impregnated with giant cutgrass (*Zizaniopsis miliacea*) were placed along the southern end of Bayou Perot to assess the possibility of vegetating the areas behind the shoreline protection structures.
Vegetation		Bayou Dupont Pump-in	VP	N/A	N/A	Ullo	Wooton	Jef.	9	2003	N/A	N/A	N/A	N/A	$7,500	A total of 1,500 bare root plugs of smooth cordgrass (*Spartina alterniflora*) and 300-feet of smooth cordgrass (*Spartina alterniflora*) impregnated coconut fiber logs were planted in order to vegetate a newly created spoil area and protect the embankment.
Vegetation		Salvador Eastern Shoreline	VP	N/A	N/A	Ullo	Wooton	Jef.	9	2003	N/A	N/A	N/A	N/A	$6,400	A total of 800 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to protect a rapidly eroding marsh area.
Vegetation		Bayou Mandeville II	VP	N/A	N/A	Boasso	Odinet	Plaq.	9	2004	N/A	N/A	N/A	N/A	$11,200	A total of 700 trade gallon containers of California bulrush (*Schoenoplectus californicus*) and 700 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to establish vegetation on a newly dredged canal.
Vegetation		Bayou Perot Cypress Tree	VP	N/A	N/A	Ullo	Wooton	Jeff.	69	2004	N/A	N/A	N/A	N/A	$1,500	Approximately 3,000 baldcypress cypress tree seedlings (*Taxodium distichum*) were planted to establish trees in newly deposited spoil.
Vegetation		Lake Des Allemands	VP	N/A	N/A	Chaisson	Wooton	Laf.	1	2004	N/A	N/A	N/A	N/A	$750	Approximately 150 feet of coconut mats impregnated with giant cutgrass (*Zizaniopsis miliacea*) were used to establish a vegetative buffer around a peninsula.

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Vegetation		Myrtle Grove	VP	N/A	N/A	Boasso	Wooton	Jeff.	14	2004	N/A	N/A	N/A	N/A	$8,000	The goal of this project was to establish vegetation in a new spoil area by planting the area with 2,000 plugs of smooth cordgrass (*Spartina alterniflora*).
Vegetation		Simoneaux Ponds Demonstration	VP	N/A	N/A	Chaisson	Smith	St.C	1	2004	N/A	N/A	N/A	N/A	$1,275	Seventy-five feet of coconut fiber mats and 100 feet of coconut fiber logs with giant cutgrass (*Zizaniopsis miliacea*) were planted in Simoneaux Ponds. The objective of this project was to establish vegetation in areas where conventional plantings have been unsuccessful.
Section 204/1135		Barataria Bay Waterway, Grand Terre Island (Phase I)	DM	N/A	N/A	Ullo	Wooton	Jef.	115	1996	N/A	N/A	N/A	N/A	$1,370,000	This Section 204 project provides for the beneficial placement of 500,000 cubic yards of dredged material from Barataria Bay Waterway to create wetlands on Grand Terre Island. Construction was completed in December of 1996.
Section 204/1135		Barataria Bay Waterway, Mile 31 to 24.5	DM	N/A	N/A	Ullo	Wooton	Jef.	125	1999	N/A	N/A	N/A	N/A	$140,000	This Section 204 project utilized dredged material from between miles 31 and 24.5 of the Barataria Bay Waterway to create marsh habitat. Construction was completed in September of 1999.
Section 204/1135		Barataria Bay Waterway, Grand Terre Island (Phase II)	DM	N/A	N/A	Ullo	Wooton	Jef.	80	1999, 2002	N/A	N/A	N/A	N/A	$100,000	This Section 204 project provided for the beneficial placement of 500,000 cubic yards of material dredged from Barataria Bay Waterway to create wetlands on the bay side of Grand Terre Island. Construction was completed in September of 1999.
WRDA	BS-08	Caernarvon Freshwater Diversion	FD	N/A	USACE	Boasso	Wooton	Plaq.	18,200	1991	N/A	N/A	N/A	N/A	$24,818,800	This project diverts freshwater and its accompanying nutrients and sediment from the Mississippi River to coastal bays and marshes in Breton Sound for fish and wildlife enhancement.
WRDA	BA-01	Davis Pond Freshwater Diversion	FD	N/A	USACE	Chaisson	Smith	StC.	33,000	2001	N/A	N/A	N/A	N/A	$106,000,000	The purpose of this project is to maintain and enhance the existing ecological framework of the Barataria Basin by providing freshwater, nutrients, and sediment. This will counter saltwater intrusion and help offset marsh subsidence.
Dedicated Dredging Program	LA-01a	Lake Salvador	DM	N/A	N/A	Chaisson	Smith	StC.	28	1999	N/A	N/A	N/A	N/A	$342,276	Two sites were filled utilizing dredged material adjacent to Baie du Cabanage on the Salvador Wildlife Management Area. This project is part of the coastwide state Dedicated Dredging Program. The goal of this program is to use a small, mobile hydraulic dredge along inland waterways in Louisiana's coastal zone to deposit dredged material, and thereby nourish and/or rebuild threatened coastal marshes adjacent to the waterways.
Dedicated Dredging Program	LA-01b	Jefferson Parish Wetlands Project	DM	N/A	N/A	Ullo	Wooton	Jef.	66	2000	N/A	N/A	N/A	N/A	$1,080,017	Three sites were filled utilizing dredged material adjacent to Bayou Dupont and The Pen. This project is part of the coastwide state Dedicated Dredging Program. The goal of this program is to use a small, mobile hydraulic dredge along inland waterways in Louisiana's coastal zone to deposit dredged material, and thereby nourish and/or rebuild threatened coastal marshes adjacent to the waterways.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Other		Fifi Island Restoration Project	SP	N/A	N/A	Ullo	Wooton	Jef.	100	2003	N/A	N/A	N/A	N/A	$3,000,000	Approximately 100 acres of existing island (Grand Isle & Fifi Island) will be protected by the installation of approximately 10,000 linear feet of rock shore protection. An additional $999,500 was contributed from the Coastal Impact Assistance Plan (CIAP) for the construction and design of this project.
Other		Fisheries Habitat Restoration on West Grand Terre Island	SP	N/A	N/A	Ullo	Wooton	Jef.	35	2003	N/A	N/A	N/A	N/A	$1,971,816	This project consists of a rock dike built to conserve the Gulf shoreline of West Grand Terre Island and protect Fort Livingston. As a result of tropical storm systems in 2002, the erosion rates along West Grand Terre Island greatly accelerated. The construction of this project was expedited for the protection of Fort Livingston on West Grand Terre Island. Fort Livingston, which is listed on the National Register of Historic Places, was constructed in the 19th century by the U. S. Army Corps of Engineers as part of the nation's coastal defense system.

Program: Breaux Act=Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA); State=Restoration projects funded primarily by the State of Louisiana through the Coastal Restoration Division; PCWRP=Parish Coastal Wetlands Restoration Program (Christmas Tree Program); Vegetation=DNR/NRCS/SWCC Vegetation Planting Program; Section 204/1135= Water Resource Development Act Sections 204 and 1135 beneficial use of dredged material projects; WRDA=Water Resources Development Act; Dedicated Dredging Program= State project LA-01a and LA-01b .

Project Type: HR=Hydrologic Restoration; DM=Beneficial Use of Dredged Material; MM=Marsh Management; MC=Marsh Creation; SP=Shoreline Protection; FD=Freshwater Diversion; VP=Vegetation Planting; SNT=Sediment and Nutrient Trapping; OM=Outfall Management; BI=Barrier Island; SD=Sediment Diversion.

PPL: Priority Project List (as authorized each year by the Breaux Act Task Force).

Agency/Sponsor: EPA=Environmental Protection Agency; NMFS=National Marine Fisheries Service; NRCS=Natural Resources Conservation Service; NWRC=National Wetlands Research Center; USFWS=U.S. Fish and Wildlife Service; USACE=U.S. Army Corps of Engineers.

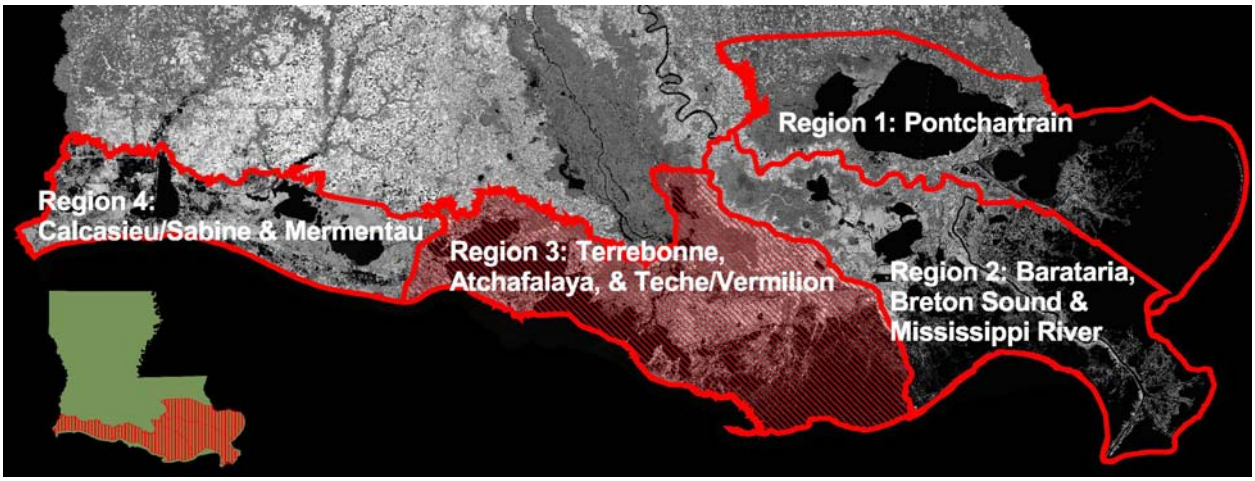
Parish: Asc.=Ascension, Asu.=Assumption, Cam.=Cameron, Ibe.=Iberia, Jef.=Jefferson, Laf.=Lafourche, Orl.=Orleans, Plaq.=Plaquemines, StB.=St. Bernard, StC.=St. Charles, StJo.=St. John the Baptist, StM.=St. Mary, StT.=St. Tammany, Tan.=Tangipahoa, Ter.=Terrebonne, Ver.=Vermilion.

Anticipated Acres Benefitted: N/A for Breaux Act demonstration and deauthorized projects.

Baseline Cost Estimates and Current Cost Estimates for Breaux Act projects are from the USACE. Costs for other restoration programs are from DNR's Contract and Budget Section. Baseline Cost and Current Cost Estimate both include contingency funds. Beginning with Breaux Act PPL 10, project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity.

N/A=Not Applicable.

REGION 3



INTRODUCTION

Region 3 encompasses the Terrebonne, Atchafalaya, and Teche-Vermilion basins. It extends from Bayou Lafourche on the east, to Freshwater Bayou on the west, and south from the Gulf of Mexico to the boundary of coastal wetlands on the north. It covers all or part of the following parishes: Lafourche, Terrebonne, Assumption, Iberville, St. Martin, Iberia, St. Mary, Lafayette, and Vermilion.

This region covers 1,140,450 acres of vegetated wetlands. These wetlands are classified as approximately 368,550 acres of cypress-tupelo swamp and bottomland forests; 298,300 acres of fresh marshes; 92,700 acres of intermediate marshes; 240,700 acres of brackish marshes; and 140,200 acres of saline marshes.

Estimates of land loss from Region 3 indicate that between 1990 and 2000, a total of 46,976 acres of wetlands were lost (an average of 4,672 acres per year).

The central and eastern portions of the Terrebonne Basin have experienced extensive losses of fresh and brackish marshes. Altered hydrology and an intermediate to high natural subsidence rate have led to excessive flooding in these wetlands, which impairs plant health and productivity and ultimately results in marsh loss. Shoreline erosion along the fringes of bays and large lakes has also contributed to the basin's significant land loss. Wetland loss in the western portion of the Terrebonne Basin is less severe, and is primarily attributed to excessive marsh inundation and ponding of water.

The Atchafalaya Basin includes Atchafalaya Bay and adjacent marshes to the north. This is a very important area for wildlife because it is the site of active delta building, which naturally builds new habitat. This area includes the Wax Lake Delta, the Atchafalaya River delta, and the "Jaws", a smaller delta.

Throughout Region 3, shoreline erosion has been severe along large lakes and bays. Generally, there is support both from parish governments and the public in Region 3 to maintain present habitats in areas above the GIWW, and restore habitats in areas below the GIWW.

Coast 2050 identified specific ecosystem strategies for protecting and sustaining the region's coastal resources. These specific ecosystem strategies can be grouped into one of the following five general categories: restoring swamps; restoring and sustaining marshes; protecting

bay, lake, and Gulf shorelines; restoring barrier islands; and maintaining brackish conditions in the Vermilion, West Cote Blanche, and East Cote Blanche bay complex, while reducing turbidity and sedimentation.

PROJECT SUMMARIES

A total of 175 restoration projects have been authorized for Region 3 (Figures 7 and 8, Table 3). Project specific information is presented below, organized by project funding source.

Breaux Act

A total of 49 projects have been authorized under the direction of the Breaux Act in Region 3, which are anticipated to benefit 20,984 acres of wetlands at a cost of $187,525,389. Two projects were constructed under the Breaux Act in Region 3 this year: Lake Portage Land Bridge (TV-17) and Four Mile Canal Terracing and Sediment Trapping (TV-18).

The Breaux Act Task Force officially deauthorized four projects in Region 3: Lower Bayou LaCache Hydrologic Restoration (TE-19), Flotant Marsh Fencing Demonstration (TE-31), Bayou Boeuf Pump Station (TE-33), and Marsh Creation East of the Atchafalaya River- Avoca Island (TE-35).

State

Twelve projects in Region 3, implemented by the CRD/CED and funded by the Wetlands Trust Fund, are projected to benefit an estimated 5,199 acres of land at a cost of $10,024,032.

Parish Coastal Wetlands Restoration Program

In Region 3, the following five Christmas tree projects were maintained in 2004: Weeks Island at GIWW, St. Martin Parish, Hammock Lake, Vermilion Bay and Rainey Wildlife Preserve, and GIWW near Hanson Canal. A total of eight projects exist in Region 3 and include approximately 5,316 linear feet of fencing.

DNR/NRCS/SWCC Vegetation Planting Program

Since 1988, a total of 95 vegetation planting projects have been implemented in Region 3. Several phases, which span over several years, exist for many of the planting projects. The vegetation planting projects that were constructed in 2004 in Region 3 are Cheniere Au Tigre 2, Apache, Audubon, Bougerois, GIWW (Lockport), Jaws Spoil Disposal, and Terrebonne Land Development.

Section 204/1135

Within Region 3, one Section 204/1135 project was constructed in 1991, and one was constructed in 2002. The Wine Island Restoration project, constructed in 1991, rebuilt the island with the use of dredged material. The Houma Navigation Canal, Wine Island Barrier Island Restoration project, constructed in late 2002, investigated the feasibility of using dredged material from the bar channel area to create 50 acres of wetlands in deteriorated marshes and open water areas.

Other

Within Region 3, one project was constructed with funding from a NOAA grant in 2002. The Brown Marsh Small Dredge Marsh Creation Project consists of a thin layer marsh creation/nourishment over 44 acres in Lafourche Parish.

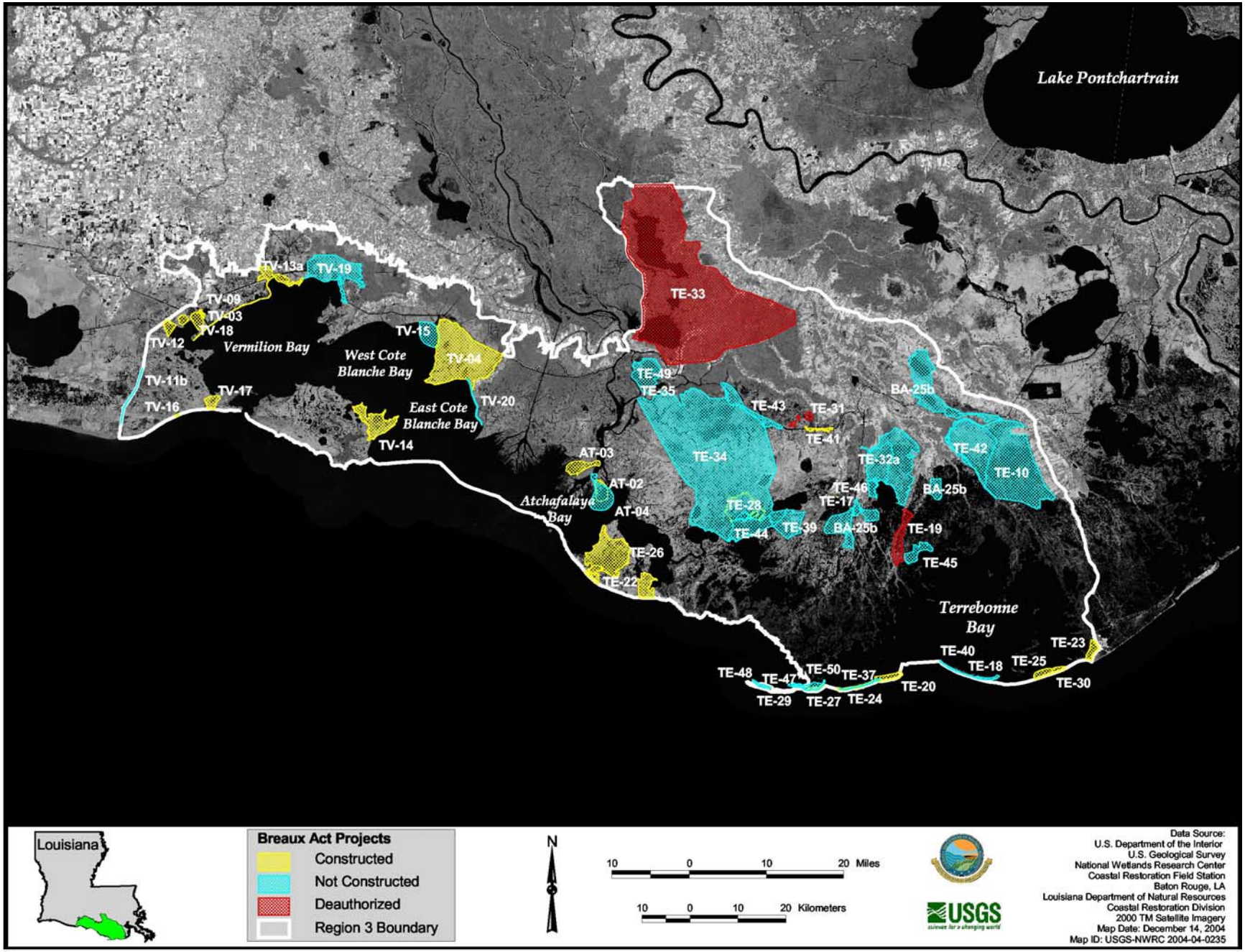


Figure 7. Location of Breaux Act projects authorized in Coast 2050 Region 3.

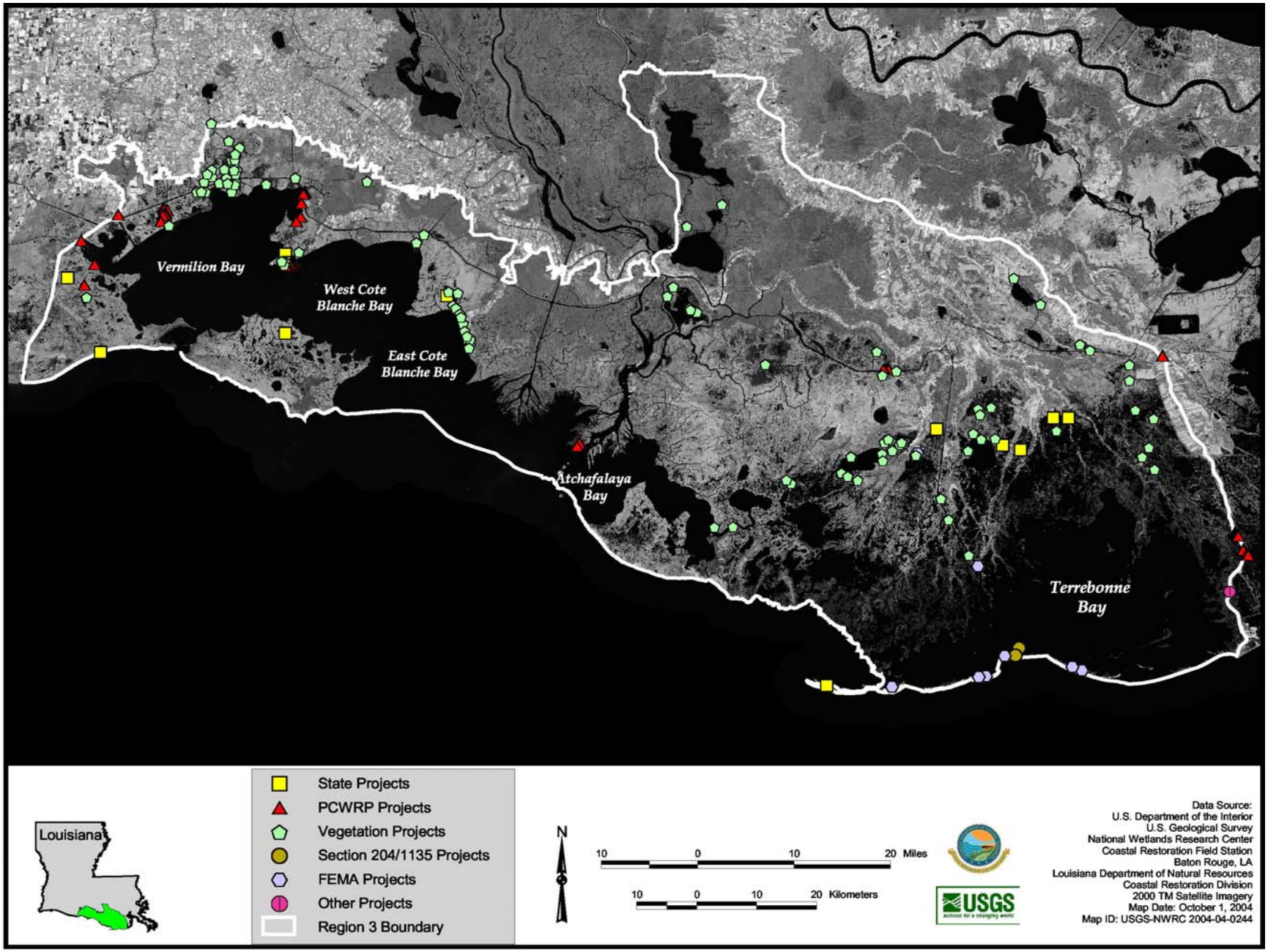


Figure 8. Location of State, PCWRP, Vegetation, Section204/1135, FEMA, Dedicated Dredging, and Other projects in Coast 2050 Region 3.

Table 3. Restoration projects completed or pending in Coast 2050 Region 3.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	AT-02 (PAT-2)	Atchafalaya Sediment Delivery	DM MC HR	2	NMFS	Gautreaux	Smith	StM.	2,232	1998	$190,588	$1,676,356	$665,202	$907,810	$2,532,147	The objective of this project is to enhance natural delta growth by re-opening Natal Channel and Castille Pass. Natal Channel was re-established with a 120-foot wide, 10-foot deep, 8,800-foot long channel and Castille Pass with a 190-foot wide, 10-foot deep, 2,000-foot long channel. Material dredged (700,925 cubic yards) as a result of construction was strategically placed at elevations mimicking natural delta lobes.
Breaux Act	AT-03 (XAT-7)	Big Island Mining	DM MC HR	2	NMFS	Gautreaux	Smith, Dartez	StM.	1,560	1998	$513,254	$5,948,384	$615,766	$4,136,057	$7,077,404	The project includes creating a new western delta lobe behind Big Island to enhance the accretion of land beyond the west bank of the Atchafalaya River. Construction included dredging of a main stem and five branch channels designed to mimic natural channel bifurcations. Dredged material was strategically placed at elevations mimicking natural delta lobes. Re-opening the channels is allowing continued natural sediment transport and marsh growth.
Breaux Act	AT-04 (XAT-11)	Castille Pass Channel Sediment Delivery	SD	9	NMFS	Gautreaux	Smith	StM.	589	Pending	$1,809,682	N/A	$46,110	$1,484,633	$1,855,792	The Castille Pass project was intended to re-establish the sedimentation processes that lead to subdelta development in this area of the Atchafalaya Delta. This project consists of dredging and extending Castille Pass to promote subdelta development.
Breaux Act	TE-10 (XTE-49)	Grand Bayou Hydrologic Restoration	HR	5	USFWS	Dupre	Pitre, Baldone	Laf.	199	Pending	$1,301,868	$2,637,807	$4,270,047	$5,135,468	$8,209,722	The objective of the project is to maintain emergent wetlands in this area by providing supplemental freshwater, nutrients, and sediment from the Atchafalaya River via the Gulf Intracoastal Waterway (GIWW). Project features include a water control structure on Bayou Pointe au Chien just south of its junction with St. Louis Canal, the relief structure on Grand Bayou, and the pipeline structure on Grand Bayou Canal.
Breaux Act	TE-17 (TE 17)	Falgout Canal Planting Demonstration	VP	1	NRCS	Dupre	Dartez	Ter.	N/A	1997	$36,330	$82,075	$90,879	$144,561	$209,284	For this demonstration project, smooth cordgrass (*Spartina alterniflora*) suited to the salinity and habitat type of the Falgout Canal area was planted along the canal and protected by 6 types of wave-stilling devices. This is a subproject of the Vegetation Plantings project.
Breaux Act	TE-18 (TE 18)	Timbalier Island Planting Demonstration	VP	1	NRCS	Dupre	Baldone	Ter.	N/A	1996	$50,575	$158,611	$97,558	$372,589	$306,745	For this demonstration project, sand fences were installed and vegetation suited to the salinity and habitat type of Timbalier Island was planted in several areas on the Island to trap sand and buffer wind and wave energy.
Breaux Act	TE-19 (TE 19)	Lower Bayou LaCache Hydrologic Restoration (Deauthorized)	HR	1	NMFS	Dupre	Baldone	Ter.	N/A	Deauth.	$92,808	N/A	$6,818	$1,694,739	$99,625	The project would have reduced marsh loss rates and improved fish and wildlife habitat quality by restoring natural north-south water exchange with estuarine water bodies and by reducing flow through the numerous dredged canals in the area. Because of problems with landrights and navigation, the project was officially deauthorized by the Breaux Act Task Force in February of 1996.
Breaux Act	TE-20 (TE 20)	Eastern Isles Dernieres, East Island	BI	1	EPA	Dupre	Baldone	Ter.	9	1999	$466,359	$7,784,527	$511,530	$6,345,468	$8,762,416	The project objective is to restore the coastal dunes and wetlands of the Eastern Isles Dernieres. Approximately 3,925,000 cubic yards of sand were dredged from adjacent waters and used to build a retaining dune which was then hydraulically filled to create an elevated marsh platform. Sand fences and vegetation were also installed to stabilize the sand and minimize wind-driven transport.
Breaux Act	TE-22 (PTE-22/24)	Point Au Fer Canal Plugs	SP HR	2	NMFS	Dupre	Dartez	Ter.	375	1997	$230,196	$2,062,750	$562,262	$1,069,589	$2,855,208	The project is intended to reduce saltwater intrusion and tidal flushing in the Point au Fer marshes, due to unplugged canals, and beach overwash, without reducing freshwater back flooding from the Atchafalaya River. This project involved plugging a number of canals and stabilizing the Mobil Canal/Gulf of Mexico breach to prevent saltwater intrusion into the interior of the island.

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Breaux Act	TE-23 (PTE-27)	West Belle Pass Headland Restoration	DM SP	2	USACE	Dupre	Pitre	Laf.	474	1998	$908,272	$5,246,257	$598,449	$4,854,102	$6,752,978	The project goals include reducing the encroachment of Timbalier Bay into the marshes on the west side of Bayou Lafourche through the use of dedicated dredged materials to create 184 acres of marsh on the west side of Belle Pass. A water control structure was placed in the Evans Canal, and plugs on other canals. Rip rap was used to amor 17,000 linear feet of the western side of Belle Pass and Bayou Lafourche.
Breaux Act	TE-24 (XTE-41)	Eastern Isles Dernieres, Trinity Island	BI	2	EPA	Dupre	Baldone	Ter.	109	1999	$517,918	$10,099,253	$157,804	$6,907,897	$10,774,974	The project objectives include the restoration of Trinity Island (dunes and marsh) of the Isles Dernieres chain. Approximately 4,850,000 cubic yards of sand were dredged from adjacent waters and used to build a retaining dune which was then hydraulically filled to create an elevated marsh platform sloping from the dune to +4.0 feet at the bay side of the island. Sand fences and vegetation were also installed to stabilize the sand and minimize wind-driven transport.
Breaux Act	TE-25 (XTE-67)	East Timbalier Island Restoration Phase I	BI	3	NMFS	Dupre	Pitre	Laf.	1,913	2000	$430,859	$3,156,091	$142,636	$2,046,971	$3,729,587	The objective of this project is to strengthen and thus increase the life expectancy of East Timbalier Island. The project called for the mining of 890,000 cubic yards of sediment and placement of the material in three embayments along the landward shoreline of East Timbalier Island. The project also included aerial seeding of the dune platform, installation of sand fencing, and dune vegetation plantings have been completed.
Breaux Act	TE-26 (PTE-23/26a /33)	Lake Chapeau Sediment Input and Hydrologic Restoration, Point Au Fer Island	HR MC	3	NMFS	Dupre, Gautreaux	Dartez, Smith	Ter.	509	1999	$599,221	$3,602,934	$1,177,832	$4,149,182	$5,379,987	The objectives of the project are to restore the marshes west of Lake Chapeau, to re-establish the hydrologic separation of the Locust Bayou and Alligator Bayou watersheds, and to re-establish the natural drainage patterns within the Lake Chapeau area. The project components included the re-establishment of a hydrologic separation of the island's two major watersheds utilizing dredged material from Atchafalaya Bay and the restoration of the island hydrology by plugging oil field access canals and gapping artificial spoil banks to restore natural hydrologic pathways.
Breaux Act	TE-27 (PTE-15bi)	Whiskey Island Restoration	BI	3	EPA	Dupre	Baldone	Laf.	1,239	1999	$566,235	$6,401,038	$139,313	$4,844,274	$7,106,586	The project is intended to create and restore beaches and back island marshes on Whiskey Island. The project consists of creating 523 acres of back island marsh and filling in the breach at Coupe Nouvelle (134 acres). The initial vegetation planting with smooth cordgrass (*Spartina alterniflora*) on the bay shore was completed in July 1998 and additional vegetation seeding/planting was carried out in Spring 2000.
Breaux Act	TE-28 (PTE-26b)	Brady Canal Hydrologic Restoration	HR	3	NRCS	Dupre	Dartez	Ter.	297	2000	$221,156	$2,630,026	$2,428,376	$4,717,928	$5,279,558	The objective of the project is to maintain the highly-fragmented transitional marshes between the fresh and estuarine zones by enhancing freshwater, sediment, and nutrient delivery into the area. The project promotes freshwater flow from Bayou Penchant into a fresh/intermediate marsh that encompasses the western-most segment of the Mauvais Bois Ridge. Tidal scouring and rapid water exchange rates would be reduced by decreasing the cross-sectional areas of natural and man-made outlets and by maintaining the banks along Bayou DeCade, Turtle Bayou, and Superior Canal.
Breaux Act	TE-29 (PTE-15-vii)	Raccoon Island Breakwaters Demonstration	BI	5	NRCS	Dupre	Baldone	Ter.	N/A	1997	$200,401	$1,373,569	$221,418	$1,497,538	$1,795,388	This demonstration project's goal is to reduce shoreline erosion and increase land coverage. Eight segmented breakwaters were constructed along the eastern end of the island to reduce the rate of shoreline retreat, promote sediment deposition along the beach, and protect seabird habitat. Project effectiveness was determined by monitoring changes in the shoreline, wave energy, and elevations along the beach, and by surveys of the gulf floor between the shoreline and the breakwaters.
Breaux Act	TE-30 (XTE-45/67b)	East Timbalier Island Restoration, Phase 2	BI	4	NRCS	Dupre	Pitre	Laf.	215	2000	$885,717	$6,570,105	$145,041	$5,752,404	$7,600,863	The project goal is to strengthen and increase the life expectancy of East Timbalier Island by placing dredged material along its landward shoreline. Additional rock has been placed on the existing breakwater in front of the island which will help protect the created area from erosion.

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Breaux Act	TE-31 (XTE-54b)	Flotant Marsh Fencing Demonstration (Deauthorized)	VP	4	NRCS	Gautreaux	Dartez	Ter.	N/A	Deauth.	$96,590	N/A	$10,370	$367,066	$106,960	The purpose of this demonstration project was to determine the effectiveness of different fencing techniques used to conserve and restore floating marshes. There was difficulty in locating an appropriate site for demonstration and in addressing engineering constraints. The restoration techniques that were originally suggested for this project were not feasible. The project was deauthorized by the Breaux Act Task Force.
Breaux Act	TE-32a (TE-7f)	North Lake Boudreaux Basin Freshwater Introduction and Hydrologic Management	FD	6	USFWS	Dupre	Dartez, Baldone	Ter.	619	Pending	$961,357	$5,453,945	$4,104,081	$9,831,306	$10,519,383	The project objective is to seasonally introduce freshwater from the Houma Navigation Canal in order to reduce saltwater intrusion and promote vegetation diversity within the project area. Project plans include enlargement of a portion of Bayou Pelton, dredging of an outfall channel, installation of a major water control structure, building a bridge for Louisiana Highway 57 over the outfall canal, construction of water management structures, and a flood protection provision.
Breaux Act	TE-33 (XTE-32i)	Bayou Boeuf Pump Station (Deauthorized)	HR	6	EPA	Gautreaux, Chaisson, Romero	Smith, Dartez, Dove, Triche, St. Germain	StM.	N/A	Deauth.	$3,452	N/A	N/A	$150,000	$3,452	The purpose of this project was to link the wetlands protection/restoration objectives of the Breaux Act with flood protection and navigation needs generally covered by WRDA. The project components consisted of implementing a long-term water management strategy for the Verret Basin, and evaluating a long-term river water delivery strategy from Atchafalaya River to Terrebonne wetlands. The project was officially deauthorized by the Breaux Act Task Force in July of 1998.
Breaux Act	TE-34 (PTE-26i)	Penchant Basin Natural Resources Plan, Increment 1	HR	6	NRCS	Gautreaux, Dupre	Dartez	Ter.	1,155	Pending	$1,669,054	$9,723,048	$2,710,949	$14,103,051	$14,103,051	The objective of the project is to combine the long-term realignment of the Penchant Basin hydrology with restoration and protection measures aimed at maintaining the physical integrity of the area during the transition toward greater riverine influence. The major problems in the project area include hydrologic alterations, interior marsh erosion, subsidence, saltwater intrusion, herbivory, and hurricane damages.
Breaux Act	TE-35 (CW-5i)	Marsh Creation East of the Atchafalaya River - Avoca Island (Deauthorized)	MC	6	USACE	Gautreaux	Dartez	StM. Ter.	N/A	Deauth.	$66,425	N/A	$443	$6,438,400	$66,869	The project consisted of the beneficial use of dredged material from the "Crew Boat Chute" and placing it in the Avoca Island area. Although the project would have benefited 434 acres at a cost of $6,438,400, the cost of the project was estimated to be considerably higher than originally planned making it economically unjustifiable. The project was officially deauthorized by the Beaux Act Task Force in July of 1998.
Breaux Act	TE-36 (CW-DEMO)	Thin Mat Floating Marsh Enhancement Demonstration	SNT	7	NRCS	Dupre	Dartez	Ter.	N/A	2000	$58,358	N/A	$471,925	$460,222	$530,283	The purpose of this demonstration project is to evaluate techniques to create and enhance thin floating mats of marsh, as well as the effects of water movement and sediment on these marshes. The objective of the project is to induce development of thick, continually floating mats from a thin-mat flotant and to determine the effects of water movement on the floats in areas with and without available sediment.

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Breaux Act	TE-37 (TE 11a)	New Cut Dune and Marsh Creation	BI	9	EPA	Dupre	Baldone	Ter.	102	Pending	$1,124,887	$9,350,842	$42,410	$7,393,626	$10,518,139	The objective of this project is to close the breach between East and Trinity Islands, that was originally created by Hurricane Carmen (1974) and subsequently enlarged by Hurricane Juan (1985). The project will create barrier island dunes and marsh habitat, and lengthen the structural integrity of the eastern Isles Dernieres by restoring the littoral drift and adding sediment into the near-shore system.
Breaux Act	TE-39 (PTE-28)	South Lake DeCade Freshwater Introduction	FD	9	NRCS	Dupre	Dartez	Ter.	201	Pending	$406,429	$17,836	$71,346	$396,489	$495,611	This project will include the construction of a water control structure in the southern bank of Lake DeCade. This will increase the amount of Atchafalaya River water and sediment introduced into the marshes south of the lake. In addition, shoreline protection will be implemented adjacent to the proposed structure and a weir in Lapeyrouse Bayou will be removed.
Breaux Act	TE-40 (XTE-45a)	Timbalier Island Dune/Marsh Creation	BI	9	EPA	Dupre	Baldone	Ter.	273	Pending	$2,088,011	$17,959,237	$42,820	$16,234,679	$20,090,068	Timbalier Island is migrating rapidly to the west/northwest; therefore, the western end of Timbalier Island is undergoing lateral migration by spit-building processes at the expense of erosion along the eastern end. The objective of this project is to restore the eastern end of Timbalier Island by the direct creation of beach, dunes, and marsh.
Breaux Act	TE-41 (XTE-DEMO)	Mandalay Bank Protection Demonstration	SP	9	USFWS	Gautreaux, Dupre	Dartez	Ter.	N/A	2003	$345,508	$1,434,445	$89,706	$1,194,495	$1,869,659	This demonstration project is intended to develop new techniques for protecting and restoring organic soils that can be easily eroded. Intact banks and breakthroughs were treated to determine the cost-effectiveness of demonstrated approaches. The project will evaluate several low-cost solutions for restoring habitat in blowout areas and preventing bank erosion.
Breaux Act	TE-42 (Complex Project)	Move Existing Atchafalaya Water to Central Terrebonne	HR	9	USFWS	Dupre	Dartez, Baldone, Pitre	StM.	N/A	Pending	N/A	N/A	N/A	N/A	N/A	This project is intended to reduce marsh loss through the improved distribution of excess freshwater seasonally available in the Gulf Intracoastal Waterway (GIWW). The project will benefit deteriorating marshes in central and/or eastern portions of the Terrebonne Basin.
Breaux Act	TE-43	GIWW Bank Restoration of Critical Areas in Terrebonne	SP	10	NRCS	Gautreaux	Dartez	Ter. Laf.	366	Pending	$1,721,029	N/A	$14,954	$1,735,983	$1,735,983	The project objective is to restore critical lengths of deteriorated channel banks and stabilize/armor selected critical lengths of deteriorated channel banks with hard shoreline stabilization materials.
Breaux Act	TE-44	North Lake Mechant Landbridge Restoration	SP	10	USFWS	Dupre	Dartez	Ter.	604	Pending	$1,383,186	$116,527	$108,339	$2,383,052	$1,608,052	The project will help to maintain and restore the landbridge (Lake Mechant north shoreline and the Small Bayou LaPointe Ridge) which provides a hydrologic barrier between brackish and low-salinity habitats. Project features include marsh creation, the planting of smooth cordgrass on the shoreline, the construction various plugs, and repairing of a fixed-crest weir along Bayou Raccourci.
Breaux Act	TE-45	Terrebonne Bay Shore Protection Demonstration	SP	10	USFWS	Dupre	Baldone	Ter.	N/A	Pending	$550,491	$1,453,746	$499,531	$2,006,373	$2,503,768	This demonstration project is intended to test several applications of concrete mats, A-Jacks®, and techniques for establishing shoreline oyster reefs for their ability to prevent shoreline erosion while encouraging oyster reef formation. The project design includes three 230 to 300 foot-long replicates of each treatment.
Breaux Act	TE-46	West Lake Boudreaux Shoreline Protection and Marsh Creation	SP MC	11	USFWS	Dupre	Dartez	Ter.	145	Pending	$1,299,782	N/A	$22,572	$1,322,354	$1,322,354	This project is intended to protect the shoreline from erosion due to direct exposure to lake wave energy and to restore interior marsh lost from subsidence and saltwater intrusion. This objective will be accomplished through the construction of a rock dike to stop erosion along the western shoreline of Lake Boudreaux and the creation of marsh habitat through the deposition of dredged material.

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Breaux Act	TE-47	Ship Shoal: Whiskey West Flank Restoration	BI	11	EPA	Dupre	Baldone	Ter.	182	Pending	$3,717,855	N/A	$24,198	$2,998,960	$3,742,053	This project is intended to rebuild dunes and a marsh platform on the west flank of Whiskey Island through the deposition of dredged material transported from Ship Shoal. This project will provide a barrier to reduce wave and tidal energy, thereby protecting mainland shoreline from continued erosion.
Breaux Act	TE-48	Raccoon Island Shoreline Protection/Marsh Creation	SP MC	11	NRCS	Dupre	Baldone	Ter.	167	Pending	$1,240,700	$6,050	$24,198	$1,016,758	$1,270,948	The goal of this project is to protect the Raccoon Island rookery and seabird colonies from an encroaching shoreline by reducing the rate of erosion along the western end of the island and creating more land along the northern shoreline. This goal will be accomplished through the construction of eight additional segmented breakwaters and a terminal groin along the gulf side of the island, adjacent to the Raccoon Island Breakwaters Demonstration (TE-29) project. In addition, dredged material will be used to create marsh on the bay side of the island.
Breaux Act	TE-49	Avoca Island Diversion and Land Building	SD	12	USACE	Gautreaux	Dartez	StM.	143	Pending	$2,185,217	N/A	$44,659	$2,229,876	$2,229,876	The project objective is to divert freshwater, sediment, and nutrients into the open water areas in central Avoca Island to create and protect 143 acres of emergent wetlands by the end of the 20-year project life. The project design team is considering the addition of a marsh creation component utilizing dredged material to increase project wetland benefits.
Breaux Act	TE-50	Whiskey Island Back Barrier Platform Creation	BI	13	EPA	Dupre	Baldone, Dartez	Ter.	540	Pending	$2,751,494	N/A	$0	$2,293,893	$2,751,494	The goal of this project is to enhance the structural function of Whiskey Island as a protective barrier for back bay and inland areas. Dredged material will be deposited on the island's back barrier area to widen the marsh platform on the central and eastern portions of Whiskey Island.
Breaux Act	TV-03 (FTV-03)	Vermilion River Cutoff Bank Protection	SP	1	USACE	Romero	Hebert	Ver.	65	1996	$509,401	$1,185,882	$327,703	$1,526,000	$2,022,987	The east bank of the Vermilion River Cutoff was stabilized by armoring the shoreline with a 6,520-foot rock breakwater to maintain the shoreline position and protect the integrity of several thousand acres of the Onion Lake wetland complex.
Breaux Act	TV-04 (TV-04)	Cote Blanche Hydrologic Restoration	HR	3	NRCS	Gautreaux	Smith	StM.	2,223	1999	$465,765	$4,128,061	$1,436,161	$5,173,062	$6,029,987	The primary objectives of the project is to reduce shoreline loss from wave erosion, reduce excessive tidal fluctuations and rapid tidal exchange to prevent scouring of interior marsh, develop a hydrologic regime conducive to sediment and nutrient deposition, and to re-establish vegetation in eroded areas. These objectives were accomplished through the use of both structural and non-structural features.
Breaux Act	TV-09 (PTV-18)	Boston Canal/Vermilion Bay Bank Protection	SP	2	NRCS	Romero	Hebert	Ver.	378	1995	$154,701	$524,439	$333,510	$1,008,634	$1,012,649	The objective of this project is to conserve vegetated wetlands by reducing erosion through the dissipation of wave energy. The project will stabilize 15 miles of Vermilion Bay shoreline and prevent further regression of the Boston Canal banks. A rock bulkhead was installed parallel to the banks of Boston Canal on both sides of the channel from the existing shoreline at the mouth of the channel and extends into the bay. Sediment fences were installed behind the bulkhead to encourage sedimentation and land accretion.
Breaux Act	TV-11b (XTV-27)	Freshwater Bayou Bank Stabilization - Belle Isle Canal to Lock	SP	9	USACE	Theunissen	Frith	Ver.	529	Pending	$1,380,303	N/A	$118,664	$1,498,967	$1,498,967	The goal of this project is to stop erosion along the the bank of Freshwater Bayou Canal, and to protect the interior wetlands from increased tidal exchange and wake-induced erosion. This objective will be achieved by constructing a rock dike along the eastern bank of Freshwater Bayou Canal, between Belle Isle Canal and Freshwater Bayou Lock.
Breaux Act	TV-12 (PTV-19)	Little Vermilion Bay Sediment Trapping	SNT	5	NMFS	Romero, Theunissen	Hebert, Frith	Ver.	441	1999	$196,817	$351,930	$337,283	$940,065	$886,030	This project is designed to optimize the retention of sediment from the Atchafalaya River to create new marsh areas in Little Vermilion Bay. Dredged material was placed to create emergent marsh, thereby protecting the existing shoreline from wind-induced wave erosion.

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Breaux Act	TV-13a (XTV-25i)	Oaks/Avery Canals Hydrologic Restoration, Increment 1	HR	6	NRCS	Romero	Hebert	Ibe. Ver.	160	2002	$471,721	$1,404,683	$996,700	$2,367,700	$2,873,104	This project is designed to protect the Vermilion Bay shoreline, the Gulf Intracoastal Waterway (GIWW) banklines, and stabilize water level fluctuation north of the GIWW and east of Oaks Canal. Vegetation was planted and rock dikes were constructed. An additional state-funded project (TV-13), located adjacent to this project, will incorporate the use of low-sill structures placed at the outfall of Avery Canal to redirect additional water flow through one particular section of Bayou Petite Anse.
Breaux Act	TV-14 (TV-5/7)	Marsh Island Hydrologic Restoration	HR	6	USACE	Romero	Hebert	Ibe. Ver.	367	2001	$653,868	$3,166,547	$1,373,747	$4,094,900	$5,194,162	The objective of the project is to stabilize the northeastern shoreline of Marsh Island, including the northern shoreline of Lake Sand, and help to restore historical hydrology. The project included construction of nine plugs in oil and gas canals at the northeast end of Marsh Island, protection of the northeast shoreline with rock, and isolation of Lake Sand from Vermilion Bay with a rock dike.
Breaux Act	TV-15 (PTV-19b)	Sediment Trapping at "The Jaws"	SNT	6	NMFS	Gautreaux	Smith	StM.	1,999	Pending	$438,654	$2,548,187	$405,294	$3,167,400	$3,392,135	The objective of the project is to induce sedimentation to create emergent vegetated wetlands. This will be achieved by constructing wetland terraces, thereby reducing wave fetch. Distributary channels will be dredged to deliver water and sediment to the project area.
Breaux Act	TV-16 (CW-05)	Chenier Au Tigre Sediment Trapping Demonstration	SNT SP	6	NRCS	Theunissen	Frith	Ver.	N/A	2001	$88,323	$457,388	$79,289	$500,000	$624,999	This demonstration project is intended to test the effectiveness of rock breakwaters that are designed to trap and retain sediment from gulf tides, stabilize the existing shoreline from on-going erosion on Chenier Au Tigre, and build up portions of the coastline that have already eroded. Increased sediment accretion on the Gulf of Mexico side of the chenier is expected to act as a buffer between the higher salinity gulf water and the brackish marsh, which lies immediately behind the chenier.
Breaux Act	TV-17 (PTV-20)	Lake Portage Land Bridge	SP	8	NRCS/ EPA	Theunissen, Romero	Hebert	Ver.	24	2004	$323,781	$749,871	$192,239	$1,013,820	$1,265,891	The objective of this project is to prevent the shoreline south of Lake Portage from breaching and creating another pass from Vermilion Bay to the Gulf. The project will consist of backfilling a canal and armoring the beach with rock.
Breaux Act	TV-18 (XTV-30)	Four Mile Canal Terracing and Sediment Trapping	SNT	9	NMFS	Romero, Theunissen	Frith, Hebert	Ver.	327	2004	$656,946	$2,739,659	$47,357	$5,086,511	$3,443,962	This project includes construction and planting of terraces with smooth cordgrass (*Spartina alterniflora*) within Little White Lake and Little Vermilion Bay, along Four Mile Canal, to abate wave-induced shoreline erosion and facilitate sedimentation in the open water areas between the terraces.
Breaux Act	TV-19 (PTV-13)	Weeks Bay Marsh Creation and Shore Protection/ Commercial Canal Freshwater Redirection	SP	9	USACE	Romero	Hebert	Ibe.	138	Pending	$1,188,236	N/A	$41,101	$1,229,337	$1,229,337	The objective of this project is to stop shoreline and bank erosion. This objective will be achieved by the construction of a retention levee and channel plugs, dedicated placement of dredged material, re-vegetating critical areas, and armoring shore/bank areas with sheetpile revetment. In addition, a low-sill weir will be placed across Commercial Canal to reduce tidal energy and redirect Atchafalaya River water.
Breaux Act	TV-20	Bayou Sale Shoreline Protection	SP	13	NRCS	Gautreaux	Smith	StM.	116	Pending	$2,254,912	N/A	N/A	$2,254,912	$2,254,912	The project goal is to reduce and/or reverse shoreline erosion and create marsh between the breakwater and the existing shoreline. A foreshore rock dike will be constructed parallel to the existing eastern shoreline of East Cote Blanche Bay.
State	TE-01	Montegut Wetland	MM	N/A	N/A	Dupre	Baldone	Ter.	1,655	1993	N/A	N/A	N/A	N/A	$1,023,487	The project objective was to protect and enhance 4,200 acres of degraded wetland habitat in the Pointe au Chien Wildlife Management Area. The project design included maintenance of approximately 3.5 miles of levee and the modification of two existing fixed-crest weirs by installing stop-logs and flapgates.

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State	TE-02	Falgout Canal Wetland	MM	N/A	N/A	Dupre	Dartez	Ter.	1,300	1993, 1995	N/A	N/A	N/A	N/A	$1,560,000	The primary objectives of the project were to protect approximately 8,000 acres of marsh and cypress-tupelo swamp, reduce saltwater intrusion, and improve wildlife habitat by moderating water flux and tidal energy in the deteriorating wetland community. Anthropogenic changes, such as the construction of pipeline and access canals throughout the region's history, have altered its original hydrology. The project design consisted of levee construction and maintenance, construction of seven water control structures, and construction of a pumping station.
State	TE-03	Bayou LaCache (Bush Canal)	MM	N/A	N/A	Dupre	Baldone	Ter.	171	1991, 1996	N/A	N/A	N/A	N/A	$1,189,494	A water control structure in Bayou LaCache needed to complete the Bush Canal Marsh Management Area was constructed. The structure is a four barrel prefabricated steel pipe structure with flap gates. The structure is 135 feet in length, consisting of four 48 inch diameter steel pipes with steel diaphragm plates, steel pipe bracing, gate supports, walkways and structural steel shop-fabricated flap gates.
State	TE-07b	Lower Petit Caillou	HR	N/A	N/A	Dupre	Baldone	Ter.	333	1995	N/A	N/A	N/A	N/A	$440,000	The objective of this project is to decrease saltwater intrusion into the project area by re-routing freshwater discharge from the Lashbrook pumping station through the project area prior to entry into Lake Boudreaux. Outfall from the pumping station is discharged into Lashbrook Canal and flows into the project area. Project features include five plugs on the perimeter of the project area to contain the pump discharge and promote sheetflow over the marsh surface, and shoreline stabilization along the northern spoilbank of Boudreaux Canal and the eastern shore of Lake Boudreaux.
State	TE-14	Point Farm Refuge Planting	VP	N/A	N/A	Dupre	Dartez	Ter.	150	1995	N/A	N/A	N/A	N/A	$192,016	This project was developed to create bottomland hardwood forests in former farmlands within the Point Farm Refuge Area (PFRA). Approximately 108,900 seedlings of bitter pecan (*Carya aquatica*), water oak (*Quercus nigra*), and cow oak (*Quercus michauxii*) (with nutria exclusion devices) were planted on 300 acres of former farmland within the PFRA.
State	TV-02b	Yellow Bayou	SP	N/A	N/A	Gautreaux	Smith	StM.	52	1992	N/A	N/A	N/A	N/A	$194,500	The objectives of the project were to maintain the integrity of approximately 2,000 acres of interior marsh between Jackson Bayou and the British-American Canal and to stabilize 7,465 feet of the East Cote Blanche Bay shoreline. This was achieved by constructing an oyster shell berm adjacent to the water's edge to reduce shoreline erosion.
State	TV-06	Marsh Island Control Structures	MM	N/A	N/A	Romero	Hebert	Ibe.	643	1993	N/A	N/A	N/A	N/A	$453,500	The objectives of this project were to reduce the rate of land loss, revegetate shallow open-water areas, and increase waterfowl food within the water management units. Flap-gated/stoplog culverts and earthen canal plugs were installed in October of 1993 at the northeast and southeast units to control water exchange between the units and the surrounding water bodies. Within the management units, canal spoil banks were breached and ditches were constructed to facilitate water movement between interior marsh ponds.
State	T/V-11	Freshwater Bayou Shoreline Protection Dike	SP	N/A	N/A	Theunissen, Romero	Frith, Hebert	Ibe. Ver.	511	1994	N/A	N/A	N/A	N/A	$2,177,025	This project conserves vegetated wetlands by maintaining the physical integrity of marshes that separate Freshwater Bayou and interior water bodies. The dominant project feature consists of the construction of 24,000 linear feet of rock dike, extending north to the confluence of Belle Isle Bayou and Freshwater Bayou. The original project was constructed in 1994; however, repairs were made to the structure in 1996 and 2001.
State	TV-13	Oaks/Avery Canal	SP	N/A	N/A	Romero	Hebert	Ibe. Ver.	160	2000	N/A	N/A	N/A	N/A	$700,000	This project enhanced the adjacent CWPPRA-funded TV-13a project by installing low-sill structures at the outfall of Oaks and Avery Canals to redirect more water flow through the portion of Bayou Petite Anse south of the GIWW.
State	TV-4355NP1	Quintana Canal/ Cypremort Point	SP	N/A	N/A	Gautreaux	Smith	StM.	26	1998	N/A	N/A	N/A	N/A	$684,610	The project features approximately 3,650 linear feet of rock breakwaters along the Vermilion Bay shoreline and approximately 3,375 of foreshore rock dike along the Vermilion Bay/Quintana Canal intersect and the south bank of the Quintana Canal.

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State	TE-LDWF	Raccoon Island Repair	DM	N/A	N/A	Dupre	Baldone	Ter.	197	1994	N/A	N/A	N/A	N/A	$1,400,000	This project was a cooperative effort that utilized dredged material and vegetation to repair Raccoon Island from storm damage. Cooperators include the Louisiana Department of Natural Resources (LDNR)/ Coastal Restoration Division (CRD), Louisiana Department of Wildlife and Fisheries (LDWF)/Fur and Refuge Division, Terrebonne Parish Consolidated Government (TPCG), South Terrebonne Tidewater Management and Conservation District, T. Baker Smith & Son, Inc., Coastal Engineering & Environmental Consultants, Inc., and Bean Dredging. Federal grant money was also utilized for this project by LDWF and TPCG.
State		Spoilbank along the GIWW	VP	N/A	N/A	Gautreaux	Dartez	Ter.	1	1993	N/A	N/A	N/A	N/A	$9,400	This project planted 8,000 feet of spoilbank along the Gulf Intracoastal Waterway with black willow (*Salix nigra*) and baldcypress (*Taxodium distichum*) in an effort to reduce further bank erosion. The effectiveness of different types of nutria exclusion devices was also tested.
PCWRP		Pelican Point/Shark Island	SP	N/A	N/A	Romero	Hebert	Ibe.	3	1991, 2003	N/A	N/A	N/A	N/A	$19,000	Brush fences were constructed in 1991 to prevent the continued shoreline erosion of Pelican Point and Shark Island in Iberia Parish.
PCWRP		GIWW near Hanson Canal	SP	N/A	N/A	Gautreaux	Dartez	Ter.	3	1991	N/A	N/A	N/A	N/A	$133,280	Brush fences were constructed to protect the shoreline along the GIWW near Hanson's Canal from boat-induced waves and erosion. A total of 1,000 California bulrush (*Schoenoplectus californicus*) and 1,000 giant cutgrass (*Zizaniopsis miliacea*) plugs were planted adjacent to the GIWW. Fences were originally constructed and filled in 1991 and maintenance was performed in 1992, 1993, 1998, 2003 and 2004.
PCWRP		Atchafalaya River Delta	SP	N/A	N/A	Gautreaux	Smith	StM.	1	1991	N/A	N/A	N/A	N/A	$50,966	Brush fences were constructed to promote the accumulation of sediment in an active delta. Fences were originally constructed and filled in 1991 and maintenance was performed in 1992 and 2003.
PCWRP		Vermilion Bay and Rainey Wildlife Preserve	SP	N/A	N/A	Romero, Theunissen	Frith, Hebert	Ver.	319	1993	N/A	N/A	N/A	N/A	$144,815	Vegetation has been planted along the shoreline and interior marsh along and adjacent to Vermilion Bay to protect the shoreline from continued erosion and to accumulate sediment to promote marsh creation. Fences were originally constructed and filled in 1993 and maintenance was performed in 1994, 1995, 1997, 1998, 1999, 2000, 2003 and 2004.
PCWRP		Shark Bayou	SP	N/A	N/A	Romero	Hebert	Ibe.	34	1996, 2003,	N/A	N/A	N/A	N/A	$17,250	Vegetation was planted along 15,000 linear feet of the Weeks Bay shoreline near Shark Bayou to decrease shoreline erosion.
PCWRP		Weeks Island at GIWW	SP	N/A	N/A	Romero	Hebert	Ibe.	5	1992	N/A	N/A	N/A	N/A	$141,381	Brush fences were constructed to protect the shoreline and promote the accumulation of sediment adjacent to Weeks Island in Iberia Parish. Fences were originally constructed and filled in 1992 and maintenance was performed in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2003 and 2004.
PCWRP	TV-02a	Hammock Lake	SP	N/A	N/A	Gautreaux	Smith	StM.	6	1992	N/A	N/A	N/A	N/A	$518,426	Brush fences were constructed to prevent erosion of the shoreline separating West Cote Blanche Bay from Hammock Lake, and to protect the adjacent marsh from erosion. Approximately 5,000 plugs of Smooth cordgrass (*Spartina alterniflora*) were planted adajcent to the brush fences. Fences were originally constructed and filled in 1992 and maintenance was performed in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001 2003 and 2004.
PCWRP		St. Martin Parish	SP	N/A	N/A	Romero	Hebert	Ibe.	0	1993	N/A	N/A	N/A	N/A	$135,900	St. Martin Parish has partnered annually with Iberia Parish and worked together on their projects at Weeks Island and Shark Bayou. Fences were originally constructed and filled in 1993 and maintenance was performed in 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2003 and 2004.
Vegetation		Lake DeCade	VP	N/A	N/A	Dupre	Dartez	Ter.	83	1988, 1989	N/A	N/A	N/A	N/A	$3,354	A total of 6,000 smooth cordgrass (*Spartina alterniflora*) plants, 400 California bulrush (*Schoenoplectus californicus*) plants, and 2,000 roseau cane (*Phragmites australis*) plants were used to restore an eroding shoreline by providing a vegetation barrier against wave-induced erosion.

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Vegetation		Pointe au Chien	VP	N/A	N/A	Dupre	Pitre	Laf.	17	1988, 1989	N/A	N/A	N/A	N/A	$6,500	A total of 12,290 smooth cordgrass (*Spartina alterniflora*) plants were used to stabilize the bank behind newly constructed wave damping devices.
Vegetation		Timbalier Island	VP	N/A	N/A	Dupre	Baldone	Ter.	133	1988	N/A	N/A	N/A	N/A	$78,736	A total of 11,600 marshhay cordgrass (*Spartina patens*) plants were used on Timbalier Island to stabilize the sand, prevent its loss due to winds, and trap additional wind-borne sand.
Vegetation		Lake DeCade Shoreline	VP	N/A	N/A	Dupre	Dartez	Ter.	18	1991	N/A	N/A	N/A	N/A	$16,000	Approximately 4,000 single stemmed plants of smooth cordgrass (*Spartina alterniflora*) were planted to damp the effects of wave energies created by wind along a cut bank.
Vegetation		Jackson Bayou Wetlands	VP	N/A	N/A	Gautreaux	Smith	StM.	9	1991	N/A	N/A	N/A	N/A	$16,020	Approximately 4,005 single-stemmed plants of smooth cordgrass (*Spartina alterniflora*) were planted to renourish marsh that had been subjected to nutria herbivory.
Vegetation		Vermilion/Weeks Bay	VP	N/A	N/A	Romero	Hebert	Ibe.	92	1991	N/A	N/A	N/A	N/A	$56,500	A total of 20,000 smooth cordgrass (*Spartina alterniflora*) plants were used to create a stand of vegetation that will protect the Weeks Bay shoreline from wave-induced erosion.
Vegetation		Vermilion Bay North	VP	N/A	N/A	Romero	Hebert	Ver.	17	1991	N/A	N/A	N/A	N/A	$10,453	A total of 3,000 smooth cordgrass (*Spartina alterniflora*) plants were used to protect the north shore of Vermilion Bay from wave induced erosion.
Vegetation		Levee Stabilization	VP	N/A	N/A	Dupre	Dartez	Ter.	2	1991	N/A	N/A	N/A	N/A	$2,825	Six marsh grass species were planted on a spoilbank in Terrebonne Parish in order to stabilize the levee. These included common bermuda (*Cynodon dactylon*), seashore saltgrass (*Distichlis spicata*), marshhay cordgrass (*Spartina patens*), Atlantic coastal panic grass (*Panicum* sp.), gulf cordgrass (*Spartina spartinae*), and seashore paspalum (*Paspalum vaginatum*).
Vegetation		Wine Island	VP	N/A	N/A	Dupre	Baldone	Ter.	24	1991, 1994, 1995	N/A	N/A	N/A	N/A	$36,612	A total of 2,500 smooth cordgrass (*Spartina alterniflora*) plants, 400 black mangrove (*Avicennia germinans*) trees, and 2,500 marshhay cordgrass (*Spartina patens*) plants were used to vegetate newly deposited dredged material.
Vegetation		Falgout Canal	VP	N/A	N/A	Dupre	Dartez	Ter.	26	1992, 1997, 1998	N/A	N/A	N/A	N/A	$15,153	Smooth cordgrass (*Spartina alterniflora*) was planted along the bank in 1992 and giant cutgrass (*Zizaniopsis miliacea*) was planted in 1998 in order to re-establish an eroded pipeline canal bank.
Vegetation		Franz-Petite Carlin Oxbow	VP	N/A	N/A	Romero	Hebert	Ibe.	14	1992	N/A	N/A	N/A	N/A	$11,784	A total of 2,946 single-stemmed plants of smooth cordgrass (*Spartina alterniflora*) were planted to stabilize cutbanks.
Vegetation		Bayou Petite Carlin	VP	N/A	N/A	Romero	Hebert	Ibe.	65	1992	N/A	N/A	N/A	N/A	$38,205	A total of 4,635 smooth cordgrass (*Spartina alterniflora*) plants and 1,000 seashore paspalum (*Paspalum vaginatum*) plants were used to protect the shoreline of Bayou Petite Carlin from wave- induced erosion.
Vegetation		Isles Dernieres	VP	N/A	N/A	Dupre	Baldone	Ter.	275	1992	N/A	N/A	N/A	N/A	$195,600	A total of 25,000 smooth cordgrass (*Spartina alterniflora*) plants were used on Trinity Island to stabilize the dune, prevent loss of sand due to winds, and trap additional wind-borne sand.
Vegetation		Lake Boudreaux	VP	N/A	N/A	Dupre	Dartez	Ter.	18	1992, 1994	N/A	N/A	N/A	N/A	$10,543	A total of 1,555 smooth cordgrass (*Spartina alterniflora*) plants were used to protect and stabilize a levee through the establishment of vegetation.

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Vegetation		Four Mile Bayou	VP	N/A	N/A	Romero	Smith	StM.	4	1993	N/A	N/A	N/A	N/A	$3,672	Approximately 918 single-stemmed plants of giant cutgrass (*Zizaniopsis miliacea*) were planted along 1,835 feet of shoreline to damp waves.
Vegetation		Montegut	VP	N/A	N/A	Dupre	Baldone	Ter.	8	1993, 1996	N/A	N/A	N/A	N/A	$4,949	A total of 730 smooth cordgrass (*Spartina alterniflora*) plants were used to provide shoreline stability to an area of the Montegut levee where approximately 200 feet of sheetpile was installed.
Vegetation		Petite Anse sites 5,6,7,8,9, and 15	VP	N/A	N/A	Romero	Hebert	Ibe.	282	1994, 1995, 1998, 2000, 2001	N/A	N/A	N/A	N/A	$194,008	A total of 56,000 smooth cordgrass (*Spartina alterniflora*) plants and 600 California bulrush (*Schoenoplectus californicus*) plants were used at several projects in order to revegetate mud flats, stabilize new spoil, protect the shoreline, and trap sediment with established vegetation.
Vegetation		Thibodaux Oxbow	VP	N/A	N/A	Romero	Hebert	Ibe.	5	1994	N/A	N/A	N/A	N/A	$3,774	A total of 1,140 smooth cordgrass (*Spartina alterniflora*) plants were used to revegetate mud flats and stabilize new spoil.
Vegetation		Bayou Milhomme	VP	N/A	N/A	Romero	Smith	StM.	5	1994	N/A	N/A	N/A	N/A	$2,949	A total of 435 California bulrush (*Schoenoplectus californicus*) plants were used along the protection levee on Bayou Milhomme to establish a buffer against additional shoreline erosion.
Vegetation		Southwest Pecan Island	VP	N/A	N/A	Theunissen	Frith	Ver.	18	1994	N/A	N/A	N/A	N/A	$24,000	A total of 4,000 pots of seashore paspalum (*Paspalum vaginatum*) were used to enhance perennials in the area and trap sediment.
Vegetation		L.L. & E. TC-T3	VP	N/A	N/A	Gautreaux	Dartez	Ter.	1	1994	N/A	N/A	N/A	N/A	$509	A total of 75 California bulrush (*Schoenoplectus californicus*) plants were used to retain flotant and detrital material in a freshwater marsh and to form plugs in spoil levee breaches.
Vegetation		Four League Bay	VP	N/A	N/A	Dupre	Dartez	Ter.	5	1995	N/A	N/A	N/A	N/A	$2,712	A total of 400 smooth cordgrass (*Spartina alterniflora*) plants were used to protect a segment of Four League Bay shoreline from wind-generated wave erosion.
Vegetation		Blue Hammock	VP	N/A	N/A	Dupre	Dartez	Ter.	2	1995	N/A	N/A	N/A	N/A	$1,356	This project was designed to prevent shoreline erosion by establishing a stand of smooth cordgrass (*Spartina alterniflora*); 200 plants were installed within the intertidal zone.

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Vegetation		Hidalgo	VP	N/A	N/A	Gautreaux	Smith	StM.	60	1995, 1997, 1999	N/A	N/A	N/A	N/A	$35,161	A total of 2,120 smooth cordgrass (*Spartina alterniflora*) plants, 1,533 California bulrush (*Schoenoplectus californicus*) plants, and 1,533 giant cutgrass (*Zizaniopsis miliacea*) plants were used to establish a stand of emergent vegetation that will prevent shoreline erosion and trap available sediment.
Vegetation		Lake DeCade - Bulrush	VP	N/A	N/A	Dupre	Dartez	Ter.	5	1995	N/A	N/A	N/A	N/A	$16,000	This project intends to restore an eroding shoreline using 400 trade gallon containers of California bulrush (*Schoenoplectus californicus*).
Vegetation		Bayou DeCade - Roseau	VP	N/A	N/A	Dupre	Dartez	Ter.	5	1995	N/A	N/A	N/A	N/A	$2,712	A total of 400 roseau cane (*Phragmites australis*) plants were used to increase protection to this embankment by providing soil stability through a potentially extensive rootmass.
Vegetation		St. Mary Land Co. '96	VP	N/A	N/A	Gautreaux	Smith	StM.	13	1996	N/A	N/A	N/A	N/A	$8,800	Approximately 1,100 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to establish a stand of emergent marsh that will prevent shoreline erosion and trap available sediment.
Vegetation		Bayou Sale '96	VP	N/A	N/A	Gautreaux	Smith	StM.	2	1996	N/A	N/A	N/A	N/A	$1,085	A total of 800 California bulrush (*Schoenoplectus californicus*) plants were used to establish a stand of emergent vegetation that will prevent shoreline erosion and trap available sediment.
Vegetation		H-H	VP	N/A	N/A	Gautreaux	Dartez	Ter.	6	1996	N/A	N/A	N/A	N/A	$3,390	A total of 300 giant cutgrass (*Zizaniopsis miliacea*) plants and 200 California bulrush (*Schoenoplectus californicus*) plants were used alongside a canal situated in a fresh marsh.
Vegetation		Jaws	VP	N/A	N/A	Gautreaux	Smith	StM.	7	1996, 1999	N/A	N/A	N/A	N/A	$4,068	A total of 600 California bulrush (*Schoenoplectus californicus*) plants were used to establish a stand of emergent vegetation that will trap available sediment and prevent the loss of the sediment already established.
Vegetation		St. Mary Land Co. '96 and #3	VP	N/A	N/A	Gautreaux	Smith	StM.	36	1996	N/A	N/A	N/A	N/A	$21,018	A total of 3,100 California bulrush (*Schoenoplectus californicus*) plants were used to establish a stand of emergent vegetation that will prevent shoreline erosion and trap available sediment.
Vegetation		Bayou Carlin	VP	N/A	N/A	Romero	Hebert	Ibe.	24	1996	N/A	N/A	N/A	N/A	$14,069	A total of 2,075 smooth cordgrass (*Spartina alterniflora*) plants were used to establish a stand of emergent vegetation that will prevent shoreline erosion and trap available sediment.
Vegetation		Bayou Piquante	VP	N/A	N/A	Gautreaux	Dartez	Ter.	2	1996	N/A	N/A	N/A	N/A	$1,220	A total of 180 California bulrush (*Schoenoplectus californicus*) plants were used to re-establish emergent vegetation on a natural bayou bank, provide a buffer for boat-generated waves, and filter suspended detrital material so that it is retained within the interior marsh.
Vegetation		Washout	VP	N/A	N/A	Romero	Hebert	Ibe.	3	1997	N/A	N/A	N/A	N/A	$1,627	A total of 60 roseau cane (*Phragmites australis*) plants and 180 smooth cordgrass (*Spartina alterniflora*) plants were used to establish a stand of emergent vegetation that will create a living barrier against wave-induced shoreline erosion and protect an area where the Vermilion Bay shoreline is in danger of breaching into an adjacent oilfield canal.
Vegetation		Tiger Lagoon #1 and #2	VP	N/A	N/A	Romero	Hebert	Ibe.	37	1997, 2000	N/A	N/A	N/A	N/A	$26,306	A total of 5,980 smooth cordgrass (*Spartina alterniflora*) plants were used to establish a stand of emergent vegetation that will prevent shoreline erosion and trap available sediment.

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Vegetation		Bayou Faleau	VP	N/A	N/A	Dupre	Pitre	Laf.	14	1997	N/A	N/A	N/A	N/A	$9,600	Approximately 1,200 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted along the tidal interface of the spoil banks. Nutria exclusion devices were used to protect the plants.
Vegetation		Bayou Blue Canal	VP	N/A	N/A	Dupre	Pitre	Laf.	14	1997	N/A	N/A	N/A	N/A	$9,600	A total of 1,200 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted along the spoil bank where the cutbank is absent or less severe. Nutria exclusion devices were used to protect the plants.
Vegetation		Lake DeCade-North Shore	VP	N/A	N/A	Dupre	Dartez	Ter.	23	1997	N/A	N/A	N/A	N/A	$16,000	Approximately 2,000 trade gallon containers of roseau cane (*Phragmites australis*) were planted to reduce shoreline erosion on the levees of Lake DeCade.
Vegetation		Lake Hatch GIWW	VP	N/A	N/A	Gautreaux	Dartez	Ter.	6	1997	N/A	N/A	N/A	N/A	$3,390	A total of 500 California bulrush (*Schoenoplectus californicus*) were used to create a living natural barrier across breaches in the Intracoastal Canal levee which allows wave energy to destroy fragile, organic freshwater marsh behind the levee.
Vegetation		Bayou Blue Bullwhip	VP	N/A	N/A	Dupre	Pitre	Ter.	23	1998	N/A	N/A	N/A	N/A	$13,560	A total of 200 smooth cordgrass (*Spartina alterniflora*) plants, 2,480 California bulrush (*Schoenoplectus californicus*) plants, and 200 roseau cane (*Phragmites australis*) plants were used to re-establish emergent vegetation on a natural bayou bank, provide a buffer for boat generated waves, and filter suspended detrital material so that it is retained within the interior marsh.
Vegetation		Humble Canal	VP	N/A	N/A	Gautreaux	Smith	StM.	23	1998	N/A	N/A	N/A	N/A	$13,560	A total of 2,000 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced marsh erosion.
Vegetation		Bayou Chauvin Pipe Canal	VP	N/A	N/A	Dupre	Dartez	Ter.	21	1998, 2000	N/A	N/A	N/A	N/A	$12,543	A total of 850 California bulrush (*Schoenoplectus californicus*) plants and 1,000 smooth cordgrass (*Spartina alterniflora*) plants were used to reduce boat-induced shoreline erosion on the edge of a pipeline canal.
Vegetation		Vermilion Corp #4	VP	N/A	N/A	Theunissen	Frith	Ver.	23	1999	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to reduce fetch, slow water exchange, and provide wildlife habitat.
Vegetation		Burns Point #1	VP	N/A	N/A	Gautreaux	Smith	StM.	2	1999	N/A	N/A	N/A	N/A	$1,280	Approximately 160 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to create an emergent stand of vegetation that will reduce shoreline erosion and trap sediment in an oilfield canal.
Vegetation		Brady Canal	VP	N/A	N/A	Dupre	Dartez	Ter.	34	1999	N/A	N/A	N/A	N/A	$60,000	A total of 7,500 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to reduce erosion on a newly constructed levee.
Vegetation		Houma Navigation Canal	VP	N/A	N/A	Dupre	Dartez	Ter.	32	1999	N/A	N/A	N/A	N/A	$18,984	A total of 2,800 smooth cordgrass (*Spartina alterniflora*) plants were used along the shoreline of the Houma Navigation Canal in order to buffer boat-wave energy and decrease bank erosion.
Vegetation		2000 Iberia Maintenance	VP	N/A	N/A	Romero	Hebert	Ibe.	4	2000	N/A	N/A	N/A	N/A	$2,400	A total of 600 bare-rooted plugs of smooth cordgrass (*Spartina alterniflora*) were planted to fill voids in the Petite Anse #7 and Petite Anse #8 vegetation projects.
Vegetation		Bayou Chauvin #2 Demo	VP	N/A	N/A	Dupre	Dartez	Ter.	17	2000	N/A	N/A	N/A	N/A	$4,800	A total of 500 trade gallons of smooth cordgrass (*Spartina alterniflora*) and 1,000 trade gallons of giant cutgrass (*Zizaniopsis miliaca*) were planted to reduce shoreline erosion and determine which planted species was a more effective barrier to wave energy.

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Vegetation		Company Canal Levee	VP	N/A	N/A	Dupre	Pitre	Laf.	31	2000	N/A	N/A	N/A	N/A	$18,306	A total of 2,700 giant cutgrass (*Zizaniopsis miliacea*) plants were used along Company Canal to establish a vegetation barrier, slow shoreline erosion, and provide seed for natural revegetation.
Vegetation		Shell Canal	VP	N/A	N/A	Dupre	Baldone	Ter.	74	2000	N/A	N/A	N/A	N/A	$43,392	A total of 4,400 smooth cordgrass (*Spartina alterniflora*) plants and 2,000 giant cutgrass (*Zizaniopsis miliacea*) plants were used to revegetate an interior marsh that has subsided near the canal bank and to protect a narrow shoreline which is beginning to erode into the adjacent marsh.
Vegetation		Cocodrie Pump-in	VP	N/A	N/A	Dupre	Baldone	Ter.	23	2000	N/A	N/A	N/A	N/A	$13,560	A total of 1,000 California bulrush (*Schoenoplectus californicus*) plants and 1,000 smooth cordgrass (*Spartina alterniflora*) plants were used to establish vegetation on a new pump-in area.
Vegetation		Camps Canal	VP	N/A	N/A	Romero	Hebert	Ver.	8	2000	N/A	N/A	N/A	N/A	$4,400	Approximately 3,300 plugs of smooth cordgrass (*Spartina alterniflora*) were planted to produce a living barrier of plants to slow erosion of canal banks and levees.
Vegetation		Oaks Canal	VP	N/A	N/A	Romero	Hebert	Ver.	36	2000	N/A	N/A	N/A	N/A	$26,442	A total of 5,200 smooth cordgrass (*Spartina alterniflora*) plants were used to produce a living barrier of vegetation that will slow erosion of canal banks and levees, accrete available sediment, provide habitat for wildlife, and make a seed source available for natural regeneration.
Vegetation		Luke Landing	VP	N/A	N/A	Gautreaux	Smith	StM.	12	2000	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 smooth cordgrass (*Spartina alterniflora*) plants were used to create stands of emergent vegetation, provide a living barrier against boat and wave-induced erosion, trap sediment, and provide a seed source for natural regeneration of emergent vegetation.
Vegetation		Bayou Carlin - GIWW	VP	N/A	N/A	Romero	Hebert	Ibe.	20	2001	N/A	N/A	N/A	N/A	$10,202	A total of 1,800 California bulrush (*Schoenoplectus californicus*) plants were placed along Bayou Carlin between Commercial Canal and the GIWW to re-establish the shoreline of Bayou Carlin, slow water movement along the shoreline, and allow for additional sediment accumulation.
Vegetation		Lake Cheniere Interior Marsh Demonstration	VP	N/A	N/A	Dupre	Baldone	Laf.	10	2001	N/A	N/A	N/A	N/A	$32,723	Both black mangrove (*Avicennia germinans*) and smooth cordgrass (*Spartina alterniflora*) were planted on the shoreline of Lake Cheniere, near Point au-Chenes, to create a buffer against shoreline erosion.
Vegetation		Small Bayou LaPointe	VP	N/A	N/A	Dupre	Dartez	Ter.	21	2001	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to create a vegetative buffer along the back side of the levee that encompasses Lake DeCade.
Vegetation		Hammock Bayou	VP	N/A	N/A	Gautreaux	Smith	StM.	6	2001	N/A	N/A	N/A	N/A	$6,273	A total of 1,640 smooth cordgrass (*Spartina alterniflora*) plants were placed along Hammock Bayou near its confluence with West Cote Blanche Bay to decrease the rate of shoreline erosion, stabilize the bank of Hammock Bayou, and to trap additional sediment.
Vegetation		Hammock Lake	VP	N/A	N/A	Gautreaux	Smith	StM.	4	2001	N/A	N/A	N/A	N/A	$21,173	A total of 360 smooth cordgrass (*Spartina alterniflora*) plants were placed along the shoreline of Hammock Lake near Cypremort Point in order to accrete additional sediment and protect the shoreline of Hammock Lake from further erosion.
Vegetation		Colony Establishment Demonstration	VP	N/A	N/A	Gautreaux	Smith	StM.	7	2001	N/A	N/A	N/A	N/A	$3,500	A total of 1,000 smooth cordgrass (*Spartina alterniflora*) plants were placed near Oyster Lake in an expansive mud flat, approximately two miles southeast of Cypremort Point, between Hammock Lake and Oyster Lake. Vegetation was planted in a grid formation to encourage ongoing, self-sustaining marsh growth in this particular shallow-water area, and to provide additional fisheries and wildlife habitat.

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Vegetation		Round Lake	VP	N/A	N/A	Gautreaux	Smith	StM.	6	2001	N/A	N/A	N/A	N/A	$3,606	A total of 560 smooth cordgrass (*Spartina alterniflora*) plants were placed along the shoreline of Round Lake, an interior lake located about three miles southeast of Cypremort Point, in order to reduce tidal exchange into the marsh, trap available sediment, and provide seed for natural revegetation.
Vegetation		Parish Line Canal	VP	N/A	N/A	Romero	Hebert	Ver.	23	2001	N/A	N/A	N/A	N/A	$11,204	A total of 2,000 smooth cordgrass (*Spartina alterniflora*) plants were placed along Parish Line Canal, just west of the Iberia/Vermilion parish line, to provide a buffer against shoreline erosion and trap available sediment.
Vegetation		Bayou Folse	VP	N/A	N/A	Dupre	Triche	Laf.	34	2002	N/A	N/A	N/A	N/A	$24,000	This project consists of a canal bank planting using 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and an interior marsh planting using 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) to create a vegetative buffer along the new spoil material on Bayou Folse and to restore vegetation in interior ponds; 15,000 linear feet were planted.
Vegetation		Grand Bayou	VP	N/A	N/A	Dupre	Pitre	Laf.	11	2002	N/A	N/A	N/A	N/A	$8,000	This canal bank planting used 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) to create a vegetative buffer against wind- and boat-generated wave energy; 5,000 linear feet of canal bank were planted.
Vegetation		Lake Boudreaux	VP	N/A	N/A	Dupre	Dartez	Ter.	11	2002	N/A	N/A	N/A	N/A	$8,000	This canal bank planting used 1,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) to provide a vegetative buffer against wind- and boat-generated wave energy; 5,000 ft of canal bank were planted using 1,000 trade gallon containers of smooth cordgrass on 5-foot centers.
Vegetation		Bayou Colyell	VP	N/A	N/A	Dupre	Dartez	Ter.	7	2002	N/A	N/A	N/A	N/A	$4,800	This canal bank planting used 600 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) to create a vegetative buffer against wind- and boat-generated wave energy; 3,000 linear feet of canal bank were planted.
Vegetation		GIWW Cypress Restoration	VP	N/A	N/A	Dupre	Pitre	Laf.	11	2002	N/A	N/A	N/A	N/A	$4,000	This canal bank planting used 500 bare root baldcypress seedlings (*Taxodium distichum*) to restore a vegetative corridor along the GIWW; 5,000 linear feet of canal bank were planted.
Vegetation		Falgout Canal Flotant	VP	N/A	N/A	Dupre	Dartez	Ter.	11	2002	N/A	N/A	N/A	N/A	$10,600	This interior marsh demonstration used 800 trade gallon containers of California bulrush (*Schoenoplectus californicus*) and 600 feet of coconut fiber matting planted with 300 giant cutgrass (*Zizaniopsis miliacea*) plugs to demonstrate the use of fiber matting to restore and establish floating marsh and to show the use of vegetative terraces to filter sediment and reduce wave energy; 4,600 linear feet of interior marsh were planted.
Vegetation		Union Oil Canal	VP	N/A	N/A	Romero	Hebert	Ibe.	23	2002	N/A	N/A	N/A	N/A	$13,400	This eroding canal bank was planted with 3,350 smooth cordgrass (*Spartina alterniflora*) plugs to produce a living barrier to slow the erosion of the canal banks and protect the interior marsh behind the banks, and to compare the effectiveness of plantings on the banks with and without trees; 10,050 linear feet were planted.
Vegetation		GIWW Delcambre	VP	N/A	N/A	Romero	Hebert	Ibe.	12	2002	N/A	N/A	N/A	N/A	$8,560	Several actively eroding areas along the GIWW were planted with a total of 700 unanchored and 900 anchored trade gallon containers of smooth cordgrass (*Spartina alterniflora*) to demonstrate the ability of the plant to produce a living barrier against erosion, and to accrete available sediment and establish stands of vegetation to serve as a seed source for natural revegetation; 5,350 linear feet were planted.
Vegetation		Avoca Island	VP	N/A	N/A	Gautreaux	Dartez	StM.	10	2002	N/A	N/A	N/A	N/A	$7,040	A total of 880 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted in several areas to slow erosion and protect interior marshes; a total of 4,400 linear feet were planted.

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Vegetation		Gray Duck Hole	VP	N/A	N/A	Gautreaux	Dartez	StM.	12	2002	N/A	N/A	N/A	N/A	$8,480	A total of 1,060 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted along an eroding levee and on islands that protect an interior marsh. This was done to create a living barrier of plants to slow erosion on the levee and on the islands, to provide wildlife habitat, and to provide a seed source for natural revegetation; 5,300 linear feet were planted.
Vegetation		Treyne	VP	N/A	N/A	Gautreaux	Dartez	StM.	14	2002	N/A	N/A	N/A	N/A	$9,600	A total of 1,200 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) plants were placed across an eroding marsh area to slow water movement to allow sediment to drop out of the flowing water, to encourage growth of submerged aquatic vegetation, and to accrete available sediment to slow sedimentation of the interior open water area; 6,000 linear feet were planted.
Vegetation		Boy Scout Camp	VP	N/A	N/A	Gautreaux	Dartez	StM.	2	2002	N/A	N/A	N/A	N/A	$1,600	A total of 200 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted in large cells to create islands of vegetation to create vegetative cells, to provide emergent vegetation in an open water area, and to determine the feasibility of using giant cutgrass to create vegetative terraces; 1,000 linear feet were planted.
Vegetation		Delcambre Terrace Demo	VP	N/A	N/A	Romero	Hebert	Ver.	12	2002	N/A	N/A	N/A	N/A	$4,320	This demonstration project used 1,080 plugs of smooth cordgrass (*Spartina alterniflora*) to establish vegetation on newly built terraces to prevent their erosion, to provide wildlife habitat, and to determine the effectiveness of smooth cordgrass in stabilizing small terraces; 5,400 linear feet were planted.
Vegetation		Raphael Canal	VP	N/A	N/A	Dupre	Pitre	Laf.	23	2002	N/A	N/A	N/A	N/A	$16,000	Approximately 2,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to establish a vegetative buffer to slow the effects of wave action on a newly established levee.
Vegetation		Lake Boudreaux	VP	N/A	N/A	Dupre	Dartez	Ter.	11	2002	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to provide a vegetative buffer against wind- and boat-generated wave energy.
Vegetation		Vermilion Maintenance	VP	N/A	N/A	Romero	Hebert	Ver.	11	2002	N/A	N/A	N/A	N/A	$6,132	This project filled gaps left when the Oaks Canal, Camp Canal, and Parish Line Canal projects were planted. A total of 1,533 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were used to provide a continuous living barrier of plants to slow erosion of canal banks and levees, and to fill in gaps and areas with poor survival; 4,600 linear feet were planted.
Vegetation		Castex Water Management Protection Project	VP	N/A	N/A	Dupre	Dartez	Ter.	23	2003	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) plants were used to form a vegetative barrier in the interior marsh which will prevent scouring caused by flap gates recently installed to manage water levels.
Vegetation		Delcambre Canal	VP	N/A	N/A	Romero	Hebert	Ver.	28	2003	N/A	N/A	N/A	N/A	$19,680	A total of 2,120 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) and 340 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted along the banks of Delcambre Canal to slow shoreline erosion and trap available sediments.

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Vegetation		Catfish Bayou South	VP	N/A	N/A	Romero	Hebert	Ibe.	6	2003	N/A	N/A	N/A	N/A	$3,332	A total of 833 plugs of smooth cordgrass (*Spartina alterniflora*) were planted to slow erosion on the bayou bank and to trap available sediments.
Vegetation		Gray Duck Hole 2	VP	N/A	N/A	Gautreaux	Dartez	StM.	23	2003	N/A	N/A	N/A	N/A	$16,000	A total of 800 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and 1,200 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to create a living barrier to slow erosion on a newly rebuilt levee and to create vegetative terraces in a large pond.
Vegetation		Burns Point 2	VP	N/A	N/A	Gautreaux	Smith	StM.	1	2003	N/A	N/A	N/A	N/A	$720	A total of 90 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted north of Burns Point to create an emergent stand of vegetation that will reduce wave induced shoreline erosion.
Vegetation		Brady Canal 2	VP	N/A	N/A	Dupre	Dartez	Ter.	11	2003	N/A	N/A	N/A	N/A	$8,000	Approximately 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to create a vegetative buffer along the interior side of a levee system.
Vegetation		Lapeyrouse Canal	VP	N/A	N/A	Dupre	Dartez	Ter.	51	2003	N/A	N/A	N/A	N/A	$750	A total of 700 bare root trees including bald cypress (*Taxodium distichum*), Nutall oak (*Quercus nuttallii*), live oak (*Quercus virginiana),* and 800 containers of shrubs were planted to establish vegetation on a spoil bank for stabilization purposes.
Vegetation		East Cote Blanche Shoreline Stabilization	VP	N/A	N/A	Gautreaux	Smith	StM.	9	2003	N/A	N/A	N/A	N/A	$6,400	A total of 400 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and 400 gallons of roseau cane (*Phragmites australis*) were planted to determine the effectiveness of both species in preventing erosion on the eastern bank of East Cote Blanche Bay.
Vegetation		Delcambre Terraces 2	VP	N/A	N/A	Romero	Hebert	Ver.	7	2003	N/A	N/A	N/A	N/A	$5,000	A total of 500 plugs of smooth cordgrass (*Spartina alterniflora*) and 500 four inch pots of saltgrass (*Distichlis spicata*) were planted to establish vegetation on newly built terraces to prevent erosion.
Vegetation		Audubon Terraces	VP	N/A	N/A	Theunissen	Frith	Ver.	10	2003	N/A	N/A	N/A	N/A	$5,800	Approximately 1,450 plugs of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation on newly built terraces to prevent erosion and increase wildlife habitat.
Vegetation		Cheniere Au Tigre 2	VP	N/A	N/A	Romero	Hebert	Ver.	7	2004	N/A	N/A	N/A	N/A	$5,160	A total of 645 trade gallon containers of bitter panicum (*Panicum amarum*), gulf cordgrass (*Spartina spartinae*), and smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation on a newly accreted beach.
Vegetation		Apache	VP	N/A	N/A	Dupre	Dartez	Ter.	23	2004	N/A	N/A	N/A	N/A	$16,000	The goal of this project was to reduce the fetch length of an interior pond by planting 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*).
Vegetation		Audubon	VP	N/A	N/A	Theunissen	Frith	Ver.	23	2004	N/A	N/A	N/A	N/A	$13,332	A total of 3,333 plugs of smooth cordgrass *(Spartina alterniflora*) were planted to establish vegetation on mudflats and canal banks to prevent erosion.
Vegetation		Bougerois	VP	N/A	N/A	Gautreaux	Smith	St.M	39	2004	N/A	N/A	N/A	N/A	$19,986	A total of 180 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*); 1,670 trade gallon containers and 150 plugs of California bulrush (*Schoenoplectus californicus*); 1,109 plugs of smooth cordgrass (*Spartina alterniflora*); and 300 bare root bald cypress tress (*Taxodium distichum*) were planted to establish vegetation in an abandoned rice field.

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Vegetation		GIWW (Lockport)	VP	N/A	N/A	Dupre	Pitre	Laf.	1	2004	N/A	N/A	N/A	N/A	$4,200	A total of 600 feet of coconut mats and logs impregnated with both giant cutgrass (*Zizaniopsis miliacea*) and smooth cordgrass (*Spartina alterniflora*) were used to establish vegetation on a newly established spoil deposit.
Vegetation		Jaws Spoil Disposal	VP	N/A	N/A	Gautreaux	Smith	St.M	26	2004	N/A	N/A	N/A	N/A	$18,000	Approximately 750 trade gallon containers of California bulrush (*Schoenoplectus californicus*), smooth cordgrass (*Spartina alterniflora*), and giant cutgrass (*Zizaniopsis miliacea*) were planted to stabilize a newly created mudflat with naturally occurring vegetation.
Vegetation		Terrebonne Land Development	VP	N/A	N/A	Dupre	Dartez	Ter.	34	2004	N/A	N/A	N/A	N/A	$24,000	A total of 3,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to establish vegetation in an open pond to reduce the fetch length.
Section 204/1135	DSR-81558	Wine Island Restoration	DM	N/A	N/A	Dupre	Baldone	Ter.	37	1991	N/A	N/A	N/A	N/A	$1,007,000	This Section 204/1135 project was a cooperative effort with the USACE and included the use of beneficial dredging from a scheduled Houma Navigational Canal maintenance dredging project to restore Wine Island.
Section 204/1135		Houma Navigation Canal, Wine Island Barrier Island Restoration	DM	N/A	N/A	Dupre	Baldone	Ter.	50	2002	N/A	N/A	N/A	N/A	$1,000,000	This Section 204/1135 project investigated the feasibility of beneficially using the dredged material from the bar channel area in lieu of the Ocean Dredged Material Disposal Site. The project area is approximately 35 miles south of Houma, Louisiana at the mouth of the navigation channel in Terrebonne Bay. The construction schedule of this project was expedited due to the impact of Hurricane Lili and Tropical Storm Isodore.
FEMA	DSR-81557	Houma Navigational Canal Levee Maintenance (FEMA)	SP	N/A	N/A	Dupre	Baldone	Ter.	4,000	1995	N/A	N/A	N/A	N/A	$218,165	This FEMA project involved the repair of segments of the western bank of the Houma Navigation Canal damaged by Hurricane Andrew in 1992.
FEMA	DSR-81558	Wine Island (FEMA)	DM	N/A	N/A	Dupre	Baldone	Ter.	25	1995	N/A	N/A	N/A	N/A	$253,579	This FEMA project was a cooperative venture with the USACE in the beneficial use of dredged material from a scheduled Houma Navigational Canal maintenance dredging project. The island was repaired to pre-Hurricane Andrew condition and planted with vegetation to stabilize the sediment.
FEMA	DSR-81560	East Island Repair Protection (FEMA)	DM	N/A	N/A	Dupre	Baldone	Ter.	25	1996	N/A	N/A	N/A	N/A	$633,179	This FEMA project constructed an elevated marsh platform in an area of a Terrebonne Parish project destroyed by Hurricane Andrew in 1992. Vegetation was also planted to stabilize the sand.
FEMA	DSR-81559	Timbalier Island Repair (FEMA)	DM	N/A	N/A	Dupre	Baldone	Ter.	70	1996	N/A	N/A	N/A	N/A	$551,653	This FEMA project closed a major breach created by Hurricane Andrew and provided a 300-foot-wide elevated marsh platform to stabilize the island. Vegetation was also planted to stabilize the sand.
FEMA	DSR-81784	Timbalier Island (FEMA 1999)	SP	N/A	N/A	Dupre	Baldone	Ter.	N/A	2000	N/A	N/A	N/A	N/A	$181,394	This FEMA project repaired sand fencing on Timbalier Island destroyed during a series of tropical storms and hurricanes in the fall of 1998.
FEMA	DSR-81785	Falgout Canal (FEMA 1999)	MM	N/A	N/A	Dupre	Baldone	Ter.	N/A	2000	N/A	N/A	N/A	N/A	$7,070	This FEMA project replaced flap gates on water control structures damaged during tropical storms and hurricanes in the fall of 1998. The installation of the new flapgate culverts was completed by Terrebonne Parish Consolidated Government.

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FEMA	DSR-81786	East Island (FEMA 1999)	VP	N/A	N/A	Dupre	Baldone	Ter.	N/A	2000	N/A	N/A	N/A	N/A	$89,940	This FEMA project involved the planting of marsh vegetation on the dune and Lake Pelto shoreline of East Island. This area is part of a CWPPRA project damaged by a series of tropical storms and hurricanes in the fall of 1998. A total of 4,280 smooth cordgrass (*Spartina alterniflora*), 500 black mangrove (*Avicennia germinans*), and 6,147 roseau cane (*Phragmites australis*) were planted in April 2000.
FEMA	DSR-81787	Whiskey Island (FEMA 1999)	SP	N/A	N/A	Dupre	Baldone	Ter.	1,259	2000	N/A	N/A	N/A	N/A	$581,566	This FEMA project involved the installation of sand fencing and the planting of vegetation to repair areas of Whiskey Island damaged by tropical storms and hurricanes during the fall of 1998. This area is part of a CWPPRA project area and CWPPRA funds were combined with the FEMA funds for repairs. Repairs were completed in August 2000.
Other		Brown Marsh Small Dredge Marsh Creation Project	MC	N/A	N/A	Pitre	Dupre	Laf.	44	2002	N/A	N/A	N/A	N/A	$473,365	The project features consisted of a thin layer marsh creation/nourishment project over 44 acres in Lafourche Parish.

Program: Breaux Act=Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA); State=Restoration projects funded primarily by the State of Louisiana through the Coastal Restoration Division; PCWRP=Parish Coastal Wetlands Restoration Program (Christmas Tree Program); Vegetation=DNR/NRCS/SWCC Vegetation Planting Program; Section 204/1135= Water Resource Development Act Sections 204 and 1135 beneficial use of dredged material projects; WRDA=Water Resources Development Act; Dedicated Dredging Program= State project LA-01a and LA-01b.

Project Type: HR=Hydrologic Restoration; DM=Beneficial Use of Dredged Material; MM=Marsh Management; MC=Marsh Creation; SP=Shoreline Protection; FD=Freshwater Diversion; VP=Vegetation Planting; SNT=Sediment and Nutrient Trapping; OM=Outfall Management; BI=Barrier Island; SD=Sediment Diversion.

PPL: Priority Project List (as authorized each year by the Breaux Act Task Force).

Agency/Sponsor: EPA=Environmental Protection Agency; NMFS=National Marine Fisheries Service; NRCS=Natural Resources Conservation Service; NWRC=National Wetlands Research Center; USFWS=U.S. Fish and Wildlife Service; USACE=U.S. Army Corps of Engineers.

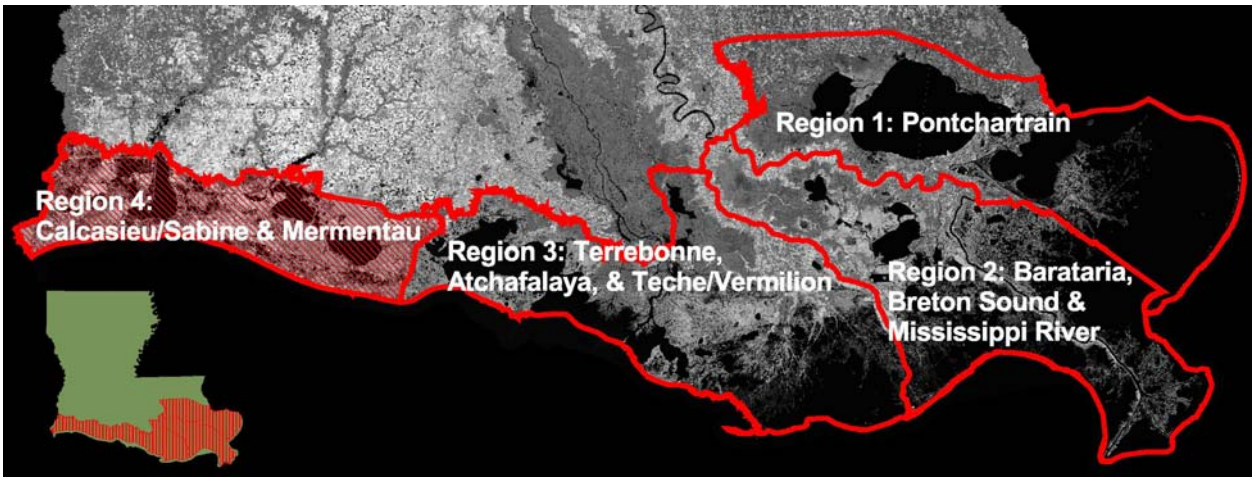
Parish: Asc.=Ascension, Asu.=Assumption, Cam.=Cameron, Ibe.=Iberia, Jef.=Jefferson, Laf.=Lafourche, Orl.=Orleans, Plaq.=Plaquemines, StB.=St. Bernard, StC.=St. Charles, StJo.=St. John the Baptist, StM.=St. Mary, StT.=St. Tammany, Tan.=Tangipahoa, Ter.=Terrebonne, Ver.=Vermilion.

Anticipated Acres Benefitted: N/A for Breaux Act demonstration and deauthorized projects.

Baseline Cost Estimates and Current Cost Estimates for Breaux Act projects are from the USACE. Costs for other restoration programs are from DNR's Contract and Budget Section. Baseline Cost and Current Cost Estimate both include contingency funds. Beginning with Breaux Act PPL 10, project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity.

N/A=Not Applicable.

REGION 4



INTRODUCTION

Region 4 includes the Mermentau and Calcasieu/Sabine hydrologic basins and contains approximately 768,210 acres of coastal wetlands. This region extends from the western bank of the Freshwater Bayou Canal, westward to the Louisiana/Texas border in Sabine Lake, and from the marshes just north of the GIWW, south to the Gulf of Mexico. This region covers all or part of Vermilion, Cameron, and Calcasieu parishes.

The wetlands in Region 4 are classified as approximately 520 acres of cypress-tupelo swamps; 9,590 acres of bottomland hardwood forests; 354,600 acres of fresh marshes, 171,700 acres of intermediate marshes; 198,600 acres of brackish marshes; and 33,200 acres of saline marshes.

Estimates of wetland loss from Region 4 indicate that between 1990 and 2000, a total of 34,688 acres of wetlands were lost (an average of 3,468 acres per year).

The Mermentau Basin extends from Freshwater Bayou Canal westward to Louisiana Highway 27, and is divided into two sub-basins: the Lakes Sub-basin north of the Grand Chenier ridge complex, and the Chenier Sub-basin to the south. The basin's primary source of freshwater inflow is the Mermentau River. The natural drainage of the Lakes Sub-basin has been interrupted by canals and water control structures. The sub-basin contains Grand and White lakes, and functions similar to a freshwater reservoir. Drainage occurs eastward to Freshwater Bayou Canal, southward to the Gulf of Mexico, and westward to the Mermentau River and Mermentau Ship Channel.

The Calcasieu/Sabine Basin is a shallow, coastal wetland system with freshwater input at the north end from the Sabine and Calcasieu rivers. Water circulates between Calcasieu and Sabine lakes via the GIWW and interior canals. Both lakes are connected to important shipping corridors and are also used for recreation. As in the Mermentau Basin, many wetlands in this basin are actively managed, with water control structures in the Cameron-Creole Watershed, Sabine National Wildlife Refuge, and on private lands.

The major objectives within this region are to reduce the salinities of the marsh habitats in the western and southern areas and to convert most of the Lakes Sub-

basin to fresh marsh. The objective for the Chenier Sub-basin is to convert the existing saline and brackish marshes to brackish and intermediate marshes respectively by the year 2050. The overall objective for the Calcasieu/Sabine Basin is to create fresher conditions by the year 2050.

Coast 2050 identified specific ecosystem strategies for protecting and sustaining the region's coastal resources. These specific ecosystem strategies can be grouped into one of the following five general categories: restoring and sustaining wetlands, controlling salinity in the Calcasieu/Sabine Basin, protecting bay and lake shorelines, restoring and maintaining barrier islands and shorelines, and maintaining critical landforms.

PROJECT SUMMARIES

A total of 151 restoration projects have been authorized for Region 4 (Figures 9 and 10, Table 4). Project specific information is presented below, organized by project funding source.

Breaux Act

A total of 34 projects have been authorized under the direction of the Breaux Act in Region 4, which are anticipated to benefit 26,745 acres of wetlands at a cost of $90,654,742. One project was constructed in Region 4 under the Breaux Act this year: Grand-White Lakes Landbridge Protection (ME-19).

The following three projects have been deauthorized in Region 4: Compost Demonstration (CS-26), SW Shore White Lake Demonstration (ME-12), and Dewitt-Rollover Vegetative Plantings Demonstration (ME-08).

State

Eight projects, implemented in Region 4 by the CRD/CED and funded by the Wetlands Trust Fund and/or local Parish funds, are estimated to benefit 1,972 acres of land at a cost of $10,582,546.

Parish Coastal Wetlands Restoration Program

The ten Christmas tree projects implemented in Region 4 are Cameron Creole, Kelso Bayou, Portie Lakes, Ellender Bridge, Black Lake, Goose Lake, Cameron Creole #2, and Prien Lake. Two sites were maintained in 2004: Kelso Bayou and Prien Lake. The PCWRP is responsible for building approximately 8,723 linear feet of fences in Region 4 since 1990.

This program also includes the first phase of two vegetation projects, Collicon Lake and Turner's Bay, where 1,200 plants were installed along 6,000 linear feet of shoreline/bankline to reduce erosion and to promote sediment accumulation.

DNR/NRCS/SWCC Vegetation Planting Program

Since 1998, a total of 95 vegetation planting projects have been implemented in Region 4. Several phases, which span over several years, exist for many of the planting projects. Projects completed in 2004 are Apache Terrace Tops, Beach Reclamation, Ducks Unlimited Terraces-Hackberry, Highway 384/GIWW, Johnson Bayou Chenier Creation, Rockefeller Terraces, Smooth Cordgrass Maintenance Demonstration 2, and Vinton Drainage Canal.

Section 204/1135

Four Section 204/1135 projects in Region 4, Brown Lake, and Calcasieu River & Pass Phases I, II, and III, created approximately 982 acres of wetlands. These projects utilized dredged material from routine maintenance of the Calcasieu Ship Channel to benefit areas along the shore of Calcasieu Lake and areas within the Sabine National Wildlife Refuge.

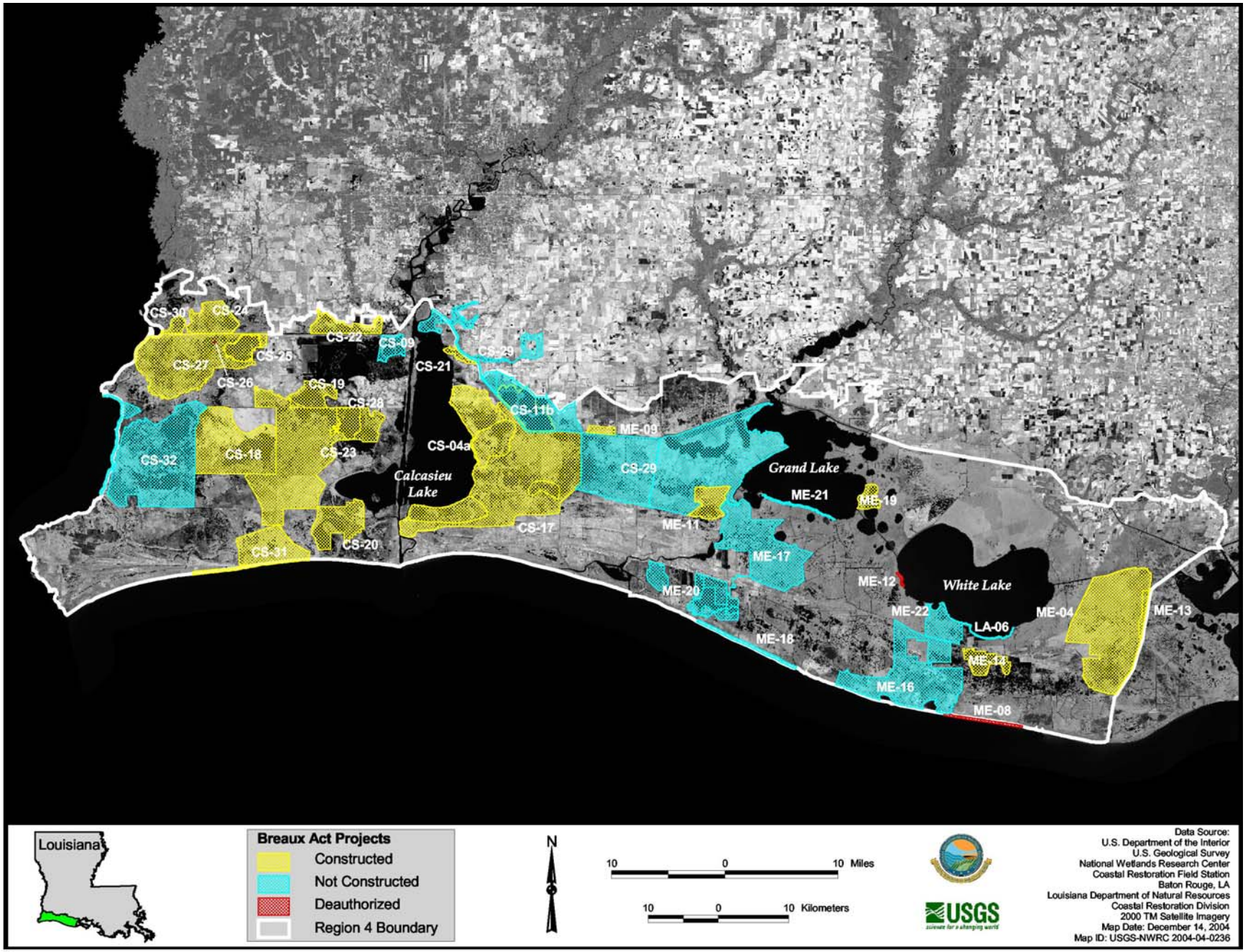


Figure 9. Location of Breaux Act projects authorized in Coast 2050 Region 4.

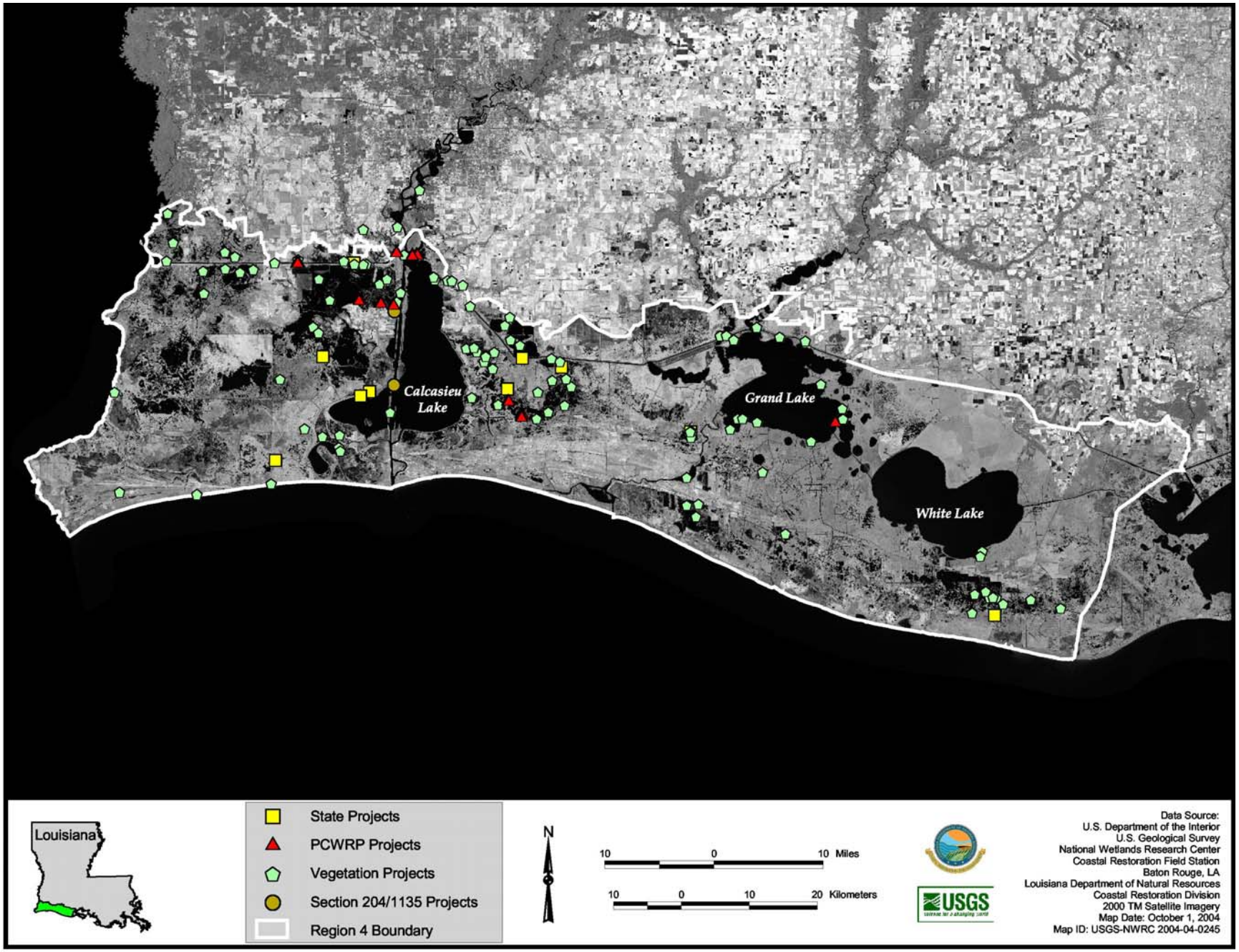


Figure 10. Location of State, PCWRP, Vegetation, and Section204/1135 projects in Coast 2050 Region 4.

Table 4. Restoration projects completed or pending in Coast 2050 Region 4.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	CS-01 (Complex Project)	Holly Beach Project	SP	9	NRCS	Theunissen	Flavin	Cam.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	The purpose of the project is to protect existing coastal wetlands by restoring and maintaining the integrity and functionality of the remaining chenier/beach ridge. This objective will be accomplished through beach re-nourishment and monitoring of the shoreline response, and possible augmentation and/or enhancement of existing breakwaters. This project was reauthorized on the 11th PPL, as the Holly Beach Sand Management Project, CS-31. An additional $4,728,125 was contributed by the Coastal Impact Assitance Plan (CIAP) for the construction this project.
Breaux Act	CS-04a (CS-04a)	Cameron-Creole Maintenance	HR	3	NRCS	Theunissen	Flavin	Cam.	2,602	1997	N/A	N/A	$3,736,718	$3,719,926	$3,736,718	The project area falls within the Cameron-Creole watershed management area, which has been adversely impacted by saltwater intrusion and loss of sediment due to channelization and water diversion of the Calcasieu River. The project provides needed maintenance for the existing 19 miles of levee and five major structures which make up the Cameron-Creole Watershed Project.
Breaux Act	CS-09 (CS 09)	Brown Lake Hydrologic Restoration	HR	2	NRCS	Theunissen, Mount	Flavin, Johns	Cam.	282	Pending	$471,841	$1,477,259	$1,252,790	$3,222,800	$3,201,890	The project is intended to restore, to the extent possible, the natural hydrology of the area. A reduction in marsh loss and improved water conditions are expected to occur following project implementation. The project includes rebuilding the Alkali Ditch levee, utilizing dredged material from the Calcasieu River when available, as well as rebuilding water control structures and canal plugs.
Breaux Act	CS-11b (CS-11b)	Sweet Lake/Willow Lake Hydrologic Restoration	SP	5	NRCS	Theunissen	Flavin	Cam.	247	2001	$408,208	$3,896,137	$639,762	$4,800,000	$4,944,107	The project objectives are to re-establish the shoreline (hydrologic boundary) between Sweet Lake and the Gulf Intracoastal Waterway (GIWW), to reduce lake turbidity and tidal exchange, and to halt erosion and trap sediment needed to rebuild marsh along the northern and northwestern shorelines of Sweet Lake. This project includes construction of rock embankments on the GIWW to close off the lakes, vegetation plantings to reduce erosion, and construction of earthen terraces combined with vegetation plantings in open water areas to promote revegetation.
Breaux Act	CS-17 (FCS-17)	Cameron Creole Plugs	HR	1	USFWS	Theunissen	Flavin	Cam.	865	1996	$73,158	$345,381	$572,756	$660,460	$991,295	The project goal is to restore historic water circulation patterns within the Cameron-Creole Watershed. This objective will be accomplished by slowing the rapid movement of saline waters that enter the watershed from Calcasieu Lake. The project consisted of the installation of two sheetpile plugs in the lakeshore borrow canal.
Breaux Act	CS-18 (FCS-18)	Sabine National Wildlife Refuge Erosion Protection	SP	1	USFWS	Theunissen	Flavin	Cam.	5,542	1995	$200,185	$1,010,568	$391,903	$4,895,780	$1,602,656	The goal of this project is to protect 13,000 acres of fresh marsh from deterioration associated with the anticipated failure of the existing west levee. The original design was to reconstruct 5.5 miles of eroded levee. The project was redesigned to include 1,000 feet of levee reconstruction and 5.5 miles of rock armor. Vegetation plantings were used to reduce erosion from boat traffic.
Breaux Act	CS-19 (FCS-19)	West Hackberry Vegetative Planting Demonstration	VP	1	NRCS	Theunissen	Flavin	Cam.	N/A	1994	$36,830	$125,461	$96,514	$213,947	$258,804	The goal of this demonstration project is to reduce marsh erosion from interior open water wave energy using vegetation plantings consisting of smooth cordgrass (*Spartina alterniflora*). In addition, wave-stilling hay bale fences were utilized to protect the vegetation plantings.
Breaux Act	CS-20 (PCS-24)	East Mud Lake Marsh Management	MM	2	NRCS	Theunissen	Flavin	Cam.	1,520	1996	$248,569	$1,150,868	$1,976,499	$2,903,635	$3,375,936	The project is intended to create a hydrologic regime conducive to restoration, protection, and enhancement of the Mud Lake area by using various types of water control structures and vegetation plantings. Structural components include culverts with flapgates, two variable crest weirs, three earthen plugs, and repair of an existing levee.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	CS-21 (PCS-25)	Highway 384 Hydrologic Restoration	MM	2	NRCS	Theunissen	Flavin	Cam.	150	2000	$154,447	$163,278	$740,829	$700,717	$1,058,554	The purpose of this project is to restore the natural hydrology of the project area and eliminate high salinities and severe water fluctuations to reduce marsh losses. The project features included the installation of flapgated culverts and a shell plug installed along the Calcasieu Lake shoreline to repair a breach.
Breaux Act	CS-22 (PCS-27)	Clear Marais Bank Protection	SP	2	USACE	Mount	Johns	Cal.	1,067	1997	$562,832	$2,229,644	$903,612	$1,741,310	$3,696,087	The goal of this project is to stabilize six miles of the Gulf Intracoastal Waterway (GIWW) channel bank with a rock armored breakwater. A 35,000 foot limestone breakwater was constructed to prevent continued erosion of the levee and to prevent encroachment of the GIWW into the project area. Vegetation plantings were used to enhance the bank protection and promote sediment trapping.
Breaux Act	CS-23 (XCS-47/48i)	Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal, and Hog Island Gully	MM	3	USFWS	Theunissen	Flavin	Cam.	953	2000	$346,299	$2,778,535	$1,404,081	$4,581,454	$4,528,915	This project was authorized to replace the water control structures on three major avenues of water passage that allow water to flow from saline areas into the project area's interior marshes. The new structures on Hog Island Gully, West Cove Canal, and Headquarters Canal will be operated to effectively discharge excess water, increase cross sectional area for movement of estuarine species, and help to curtail saltwater intrusion into the interior marshes.
Breaux Act	CS-24 (PCS-26i)	Perry Ridge Shore Protection	SP	4	NRCS	Mount	Johns	Cal.	1,203	1999	$244,881	$1,465,996	$578,213	$2,223,518	$2,289,090	The project is intended to reduce tidal scour, wave action from boats, and other excessive energy impacts on interior marshes, and reduce the possibility of saltwater intrusion by repairing the northern spoil bank of the Gulf Intracoastal Waterway (GIWW). A rip-rap breakwater was placed along low areas of the northern bank of the GIWW from Perry Ridge to Vinton Drainage Canal.
Breaux Act	CS-25 (XCS-56)	Plowed Terraces Demonstration	SNT	4	NRCS	Theunissen, Mount	Flavin, Johns	Cam.	N/A	2000	$65,788	$214,428	$45,425	$299,690	$325,641	This demonstration project is intended to develop and demonstrate a non-traditional procedure for constructing earthen terraces in shallow open water areas. Thirty-eight earthen terraces served as wave-stilling, sediment-trapping structures and provided a medium base for the establishment of emergent vegetation.
Breaux Act	CS-26 (XCS-36)	Compost Demonstration (Deauthorized)	MC	4	EPA	Theunissen	Flavin	Cam.	N/A	Deauth.	$78,818	$137,273	$39,299	$370,594	$255,391	This project was authorized to evaluate the effectiveness of using tree trimmings as compostable material, using compost amended material in providing a growth medium for emergent vegetation, and determining settlement rates of the compost amended materials and tree trimmings. The project was officially deauthorized by the Breaux Act Task Force in January 2002.
Breaux Act	CS-27 (XCS-48)	Black Bayou Hydrologic Restoration	HR	6	NMFS	Mount	Flavin, Johns	Cam.	3,594	2001	$764,796	$3,775,897	$1,431,920	$6,316,800	$5,972,613	The project goals are to reduce wetland loss resulting from hydrologic changes including reduced freshwater inflow, increased magnitude and duration of tidal fluctuations, increased salinities, higher water levels, and excessive water exchange. This project included the construction of spoil banks, weirs, plugs, and culverts designed to allow freshwater from the Gulf Intracoastal Waterway (GIWW) into the wetlands, and to create a hydrologic head that increases freshwater retention time and reduces saltwater intrusion.
Breaux Act	CS-28 (XCS-48 (SA-1))	Sabine Refuge Marsh Creation, Increment 1	MC	8	USACE/ USFWS	Theunissen	Flavin	Cam.	993	2002	$554,316	$2,830,427	$27,672	$15,724,965	$3,412,415	The project is intended to strategically create marsh in large, open water areas to block wind-induced saltwater introduction and freshwater loss. Additionally, it will increase nourishment in adjacent marshes while reducing open water fetch and erosion of marsh fringe. The project consists of 5 marsh creation sites (5 cycles) within the Sabine National Wildlife Refuge using material dredged from the Calcasieu River Ship Channel.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	CS-29 (CS 16)	Black Bayou Culverts Hydrologic Restoration	HR	9	NRCS	Theunissen	Flavin	Cam.	540	Pending	$893,373	$4,226,669	$266,110	$5,900,387	$5,386,152	The project objective is to discharge and remove excess water, which has contributed to marsh loss and shoreline erosion. This project consists of installing box culverts with sluice gates in Black Bayou and relocating Louisiana Hwy 384 over the culverts. Operation of the structure will be in coordination with Calcasieu Lock and the Schooner Bayou and Catfish Point water control structures.
Breaux Act	CS-30 (PCS-26ii)	GIWW - Perry Ridge West Bank Stabilization	SP	9	NRCS	Mount	Johns	Cal.	83	2001	$307,612	$1,325,370	$107,062	$3,742,451	$1,740,044	This project was authorized to install rip-rap along the northern bank of the Gulf Intracoastal Waterway (GIWW) in an area which was dredged to a depth of 30 feet to allow for the use of double barge traffic. The project consisted of installing rock along the bank to prevent further erosion.
Breaux Act	CS-31	Holly Beach Sand Management Project	SP	11	NRCS	Theunissen	Flavin	Cam.	330	2002	$569,642	$12,964,592	$621,000	$19,252,492	$14,155,234	The purpose of the project is to protect existing coastal wetlands by restoring and maintaining the integrity and functionality of the remaining chenier/beach ridge. This objective was accomplished through beach renourishment, installation of sand fencing, vegetation plantings, and monitoring of the shoreline response. This project was originally authorized on the 9th PPL as a complex project, Holly Beach Project, CS-01.
Breaux Act	CS-32	East Sabine Lake Hydrologic Restoration	HR	10	NRCS/ USFWS	Theunissen	Flavin	Cam.	393	Pending	$1,489,441	$3,939,219	$66,183	$1,510,206	$1,489,441	This project utilizes water control structures, shoreline protection, terraces, and vegetation plantings to restore the historical hydrologic regime to approximately 36,623 acres of the Sabine National Wildlife Refuge. Specific goals include reducing elevated salinities within fresh and intermediate marshes, reducing tidal scour, reducing erosion on the eastern shore of Sabine Lake, reducing the turbidity of open water areas, and restoring and protecting marsh.
Breaux Act	ME-04 (XME-21)	Freshwater Bayou Wetland Protection	HR SP	2	NRCS	Theunissen	Frith	Ver.	1,593	1998	$285,397	$1,019,875	$2,150,032	$2,770,093	$3,455,303	This project was constructed in two phases. Phase I was completed in 1995 and consisted of a 10,000 linear-foot rock dike to protect the west bank of Freshwater Bayou Canal from shoreline erosion. Phase II of the project was completed in 1998 and included the construction of several water control structures to improve the capability of the interior wetlands to mediate the effects of increased salinity and higher water level fluctuations, on vegetation cover.
Breaux Act	ME-08 (ME-08)	Dewitt-Rollover Vegetative Plantings Demonstration (Deauthorized)	VP	1	NRCS	Theunissen	Frith	Ver.	N/A	1994 Deauth.	$36,830	$51,460	$3,722	$191,003	$92,012	This demonstration project's purpose was to investigate the ability of vegetation plantings of smooth cordgrass (*Spartina alterniflora*) to colonize a newly accreted mudflat, thereby establishing a vegetation buffer between the Gulf and coastal wetlands. This project was officially deauthorized by the Breaux Act Task Force in February 1996 because no plants remained.
Breaux Act	ME-09 (ME-09)	Cameron Prairie National Wildlife Refuge Shoreline Protection	SP	1	USFWS	Theunissen	Flavin	Cam.	247	1994	$61,112	$851,775	$314,236	$1,177,668	$1,227,123	The project goals are to protect the emergent wetlands of the Cameron Prairie National Wildlife Refuge adjacent to the Gulf Intracoastal Waterway (GIWW). Project features include construction of approximately 2.5 miles of rock dike parallel to the existing spoil bank, thereby terminating the encroachment of the GIWW into the refuge.
Breaux Act	ME-11 (PME-15)	Humble Canal Hydrologic Restoration	HR	8	NRCS	Theunissen	Flavin	Ver.	378	2003	$155,912	$460,221	$914,679	$1,526,136	$1,530,812	The objective of this project is to restore historical hydrology to the project area. Project features include a 48-inch flapgated structures, which will continue to protect the area from saltwater intrusion from the Mermentau River and allow for drainage of high water levels from the marsh to the river.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	ME-12 (PME-6)	Southwest Shore White Lake Demonstration	SP	3	NRCS	Theunissen	Frith, Flavin	Ver.	N/A	1996 Deauth.	$21,752	$20,025	$61,692	$126,062	$103,468	The objective of this demonstration project was to stabilize one mile of the White Lake shoreline and prevent breaching into Deep Lake. The project was initiated to determine if California bulrush (*Schoenoplectus californicus*) is effective at damping high energy wave action. The project was officially deauthorized by the Breaux Act Task Force in October of 1998 and is no longer monitored.
Breaux Act	ME-13 (XME-29)	Freshwater Bayou Bank Stabilization	SP	5	NRCS	Theunissen	Frith	Ver.	511	1998	$228,978	$1,682,077	$632,258	$3,998,919	$2,543,313	The objective of this project is to protect the integrity of the Mermentau River Basin by preventing interior ditches from connecting Freshwater Bayou Canal to the Old Intracoastal Canal. A 23,193 linear-foot rock dike was constructed approximately 100 feet from the existing shoreline to prevent Freshwater Bayou Canal from eroding into the intermediate marshes.
Breaux Act	ME-14 (XME-22)	Pecan Island Terracing	SNT	7	NMFS	Theunissen	Frith	Ver.	442	2003	$465,925	$2,045,339	$351,542	$2,185,900	$2,862,806	The goal of this project it to convert areas of open water back to vegetated marsh. Project features included the construction of earthen terraces to reduce wave action.
Breaux Act	ME-16 (PME-07a)	Freshwater Introduction South of Highway 82	FD	9	USFWS	Theunissen	Frith, Flavin	Ver.	296	Pending	$478,013	N/A	$129,125	$607,138	$607,138	This project was authorized to address saltwater intrusion and lack of freshwater and sediment input in the project area. Project components include the installation of approximately eight water control structures, breaching spoilbanks in areas near Louisiana Hwy 82 to allow water to flow across the chenier, and the removal of plugs to facilitate water flow from the Lakes subbasin south into the Chenier subbasin.
Breaux Act	ME-17 (XME-42a)	Little Pecan Bayou Hydrologic Restoration	HR	9	NRCS	Theunissen	Flavin	Cam.	144	Pending	$1,400,600	$31,200	$124,798	$1,245,278	$1,556,598	The project objectives include providing a means to remove excess water from the Lakes subbasin by installing a water control structure within Little Pecan Bayou, constructing a freshwater conveyance channel with two water control structures through Grand Chenier Ridge to assist in excess water removal, and excavation of a collector channel within the marsh.
Breaux Act	ME-18	Rockefeller Refuge Gulf Shoreline Stabilization	SP	10	NMFS	Theunissen	Flavin	Cam.	920	Pending	$2,393,615	N/A	$14,863	$1,929,888	$2,408,478	The project will address Rockefeller Refuge Gulf shoreline retreat which averages approximately 31 feet per year with subsequent direct loss of saline marsh. The project would entail construction of a nearshore breakwater along the Gulf of Mexico shoreline, extending approximately from Beach Prong to Joseph Harbor.
Breaux Act	ME-19	Grand-White Lakes Landbridge Protection	SP	10	USFWS	Theunissen	Flavin	Cam.	213	2004	$653,018	$3,936,864	$1,206,292	$9,635,224	$5,796,174	This project is intended to protect freshwater wetlands by stopping the erosion of the southeastern shoreline of Grand Lake and the western shoreline of Collicon Lake. Project features include construction of hard structure shoreline stabilization and planted earthen terraces to protect the landbridge.
Breaux Act	ME-20	South Grand Chenier Hydrologic Restoration Project	HR	11	USFWS	Theunissen	Flavin	Mer.	440	Pending	$2,295,423	N/A	$62,997	$2,358,420	$2,358,420	This project is intended to restore the Hog Bayou watershed hydrology through the use of dredged material to create two 200-acre cells that will stop saltwater intrusion into the project area. Freshwater, sediment, and nutrients from the Mermentau River will also be introduced into the project area at two separate locations.
Breaux Act	ME-21	Grand Lake Shoreline Protection	SP	11	USACE	Theunissen	Flavin	Cam.	495	Pending	$1,032,157	N/A	$16,872	$1,049,029	$1,049,029	The objective of this project is to reduce erosion along the southern shoreline of Grand Lake which is caused by high wave energy associated with storm winds and frontal passages. Project features will include construction of a rock breakwater from Superior Canal to Tebo Point.
Breaux Act	ME-22	South White Lake Shoreline Protection	SP	12	USACE	Theunissen	Frith	Ver.	702	Pending	$1,557,153	N/A	$30,932	$1,588,085	$1,588,085	This project is intended to reduce erosion along the southern White Lake shoreline through the construction of a foreshore rock dike. Marsh accretion and submerged aquatic vegetation habitat creation is expected to occur behind the structure due to the occasional overwash of waves and the reduction of turbidity in the interior open water areas.

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Breaux Act	LA-06	Shoreline Protection Foundation Improvements Demonstration (Demo)	SP	13	USACE	Theunissen	Frith	Ver.	N/A	Pending	$360,809.00	$443,344.00	$250,847.00	$1,000,000	$1,055,000	The goal of this demonstration project is to determine the feasibility of shoreline protection structures where a relatively poor soil foundation exists. This goal will be achieved using sand as a foundation beneath rock dike structures as a means to increase bearing capacity and consolidation settlement design tolerances. This project will be incorporated into the South White Lake Shoreline Protection (ME-22) project.
State	CS-01bc	Holly Beach	SP	N/A	N/A	Theunissen	Flavin	Cam.	88	1991, 1992, 1993, 1994	N/A	N/A	N/A	N/A	$8,437,000	The objective of this project is to protect the marsh north of the Gulf of Mexico shoreline by expanding shoreline protection in phases from Ocean View, Louisiana to the east near Calcasieu Pass. A total of 34 breakwaters were constructed in 1991, 21 breakwaters were constructed in 1992, 21 breakwaters were constructed in 1993, and nine breakwaters were constructed in 1994 between Calcasieu Pass and Holly Beach, Louisiana. Eighteen of the existing breakwaters were raised and/or extended in 2003 utilizing marine mattress foundations and armor stone.
State	CS-02	Rycade Canal	MM	N/A	N/A	Theunissen	Flavin	Cam.	1,200	1994	N/A	N/A	N/A	N/A	$516,474	The project is designed to stabilize salinities and water levels in the project area by reducing water flows through Rycade Canal and Black Lake.
State	CS-04a-1	Cameron-Creole Structure Automation	HR	N/A	N/A	Theunissen	Flavin	Cam.	N/A	1999	N/A	N/A	N/A	N/A	$700,000	This project consists of automating three existing water control structures along the east shore of Calcasieu Lake. These structures are remotely located and are difficult to manipulate. Automation of these structures will improve management capabilities in the Sabine National Wildlife Refuge.
State	ME-01	Pecan Island	FD	N/A	N/A	Theunissen	Frith	Ver.	84	1992	N/A	N/A	N/A	N/A	$487,152	The purpose of this project is to introduce freshwater from the north to counteract the saltwater intrusion from the south. The project consists of two water control structures and approximately 5,700 linear feet of earthen embankment needed to channel water from White Lake to the south marshes.
State		Blind Lake	SP	N/A	N/A	Theunissen	Flavin	Cam.	N/A	1989	N/A	N/A	N/A	N/A	$173,433	The purpose of this project was to prevent the Gulf Intracoastal Waterway from breaching into Blind Lake. The project consisted of placing 2,339 linear feet of limestone breakwater along the south side of the GIWW adjacent to Blind Lake. The second phase of this project included planting giant cutgrass (*Zizaniopsis miliacea*) along the inside of the breakwater to enhance the accretion process.
State		Brannon Ditch	SP	N/A	N/A	Mount	Hebert	Cal.	480	1991	N/A	N/A	N/A	N/A	$12,440	This project included the construction of wooden breakwater fences along 2,200 feet of the GIWW across from Brannon Ditch in Calcasieu Parish. This area has experienced shoreline erosion in excess of 25 feet/year. The breakwaters will reduce wave action from boats and the current from Brannon Ditch during periods of high discharge. Smooth cordgrass (*Spartina alterniflora*) was also planted behind the breakwaters in order to enhance accretion and increase the stability of this site.
State		Sabine Shellbank Stabilization	SP	N/A	N/A	Theunissen	Flavin	Cam.	10	1990	N/A	N/A	N/A	N/A	$66,000	The purpose of this project was to provide natural shoreline protection by using tidal currents to deposit clam shell on the shoreline. The benefits of this design over the use of permanent structures are lower cost, less disturbance of the natural habitat during construction, and allowing natural distribution of sediment and organisms without impediment.
State		Sabine Terraces	SNT	N/A	N/A	Theunissen	Flavin	Cam.	110	1991	N/A	N/A	N/A	N/A	$190,047	A total of 128 earthen terraces were constructed in a checkerboard pattern and planted with smooth cordgrass (*Spartina alterniflora*) in open water areas of the Sabine National Wildlife Refuge. This will increase the length of marsh-water interface, re-establish emergent marsh vegetation, reduce marsh fringe retreat by reducing wind-generated wave energy, increase overall primary productivity, and promote the deposition of suspended sediment.

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PCWRP		Cameron-Creole	SP	N/A	N/A	Theunissen	Flavin	Cam.	8	1990	N/A	N/A	N/A	N/A	$69,900	Brush fences were constructed to trap sediment and act as a barrier to slow saltwater intrusion in the interior marsh. Fences were originally constructed and filled in 1990 and maintenance was performed in 1992, 1994, 1997, and 2003.
PCWRP		Kelso Bayou	SP	N/A	N/A	Theunissen	Flavin	Cam.	1	1991	N/A	N/A	N/A	N/A	$45,245	Brush fences were constructed to re-establish the eroded shoreline and promote sediment deposition along Kelso Bayou in Cameron Parish, Louisiana. Fences were originally constructed and filled in 1991 and maintenance was performed in 1993, 1996, 1999, 2003 and 2004.
PCWRP		Portie Lakes	SP	N/A	N/A	Theunissen	Flavin	Cam.	2	1992	N/A	N/A	N/A	N/A	$32,500	Brush fences were constructed to decrease erosion by trapping sediment along the shoreline and interior marsh adjacent to Portie Lake. Fences were originally constructed and filled in 1992 and maintenance was performed in 1996, 1998, 1999, and 2003.
PCWRP		Ellender Bridge	SP	N/A	N/A	Mount	Johns	Cal.	2	1992	N/A	N/A	N/A	N/A	$43,561	Brush fence were constructed to protect marsh that was exposed to the GIWW. Fences were originally constructed and filled in 1992 and maintenance was performed in 1993, 1995, 1996, 1999, and 2003.
PCWRP		Black Lake	SP	N/A	N/A	Theunissen	Flavin	Cam.	2	1993	N/A	N/A	N/A	N/A	$52,500	Brush fences were constructed to decrease wind fetch and prevent continued erosion of the Black Lake shoreline by wind-generated waves. Fences were originally constructed and filled in 1993 and maintenance was performed in 1994, 1995, 1996, 1998, 2000, and 2003.
PCWRP		Goose Lake	SP	N/A	N/A	Mount	Johns	Cal.	1	1994	N/A	N/A	N/A	N/A	$14,495	Brush fences were constructed along the GIWW at Goose Lake to slow the shoreline erosion at this intersection. Fences were originally constructed and filled in 1994 and maintenance was performed in 1995 and 2003.
PCWRP		Collicon Lake	SP	N/A	N/A	Theunissen	Flavin	Cam.	9	1996, 2003	N/A	N/A	N/A	N/A	$9,500	Vegetation was planted along the shoreline of Collicon Lake to slow the shoreline erosion, promote sediment accumulation, and enhance fish habitat.
PCWRP		Turner Bay	SP	N/A	N/A	Theunissen	Flavin	Cal.	2	1996	N/A	N/A	N/A	N/A	$87,500	Brush fences were constructed to protect the interior shoreline of Turner Bay. Fences were originally constructed and filled in 1996 and maintenance was performed in 1997, 1998, 1999, 2000, and 2003.
PCWRP		Cameron Creole #2	SP	N/A	N/A	Theunissen	Flavin	Cam.	3	1998	N/A	N/A	N/A	N/A	$46,500	Brush fences were constructed to slow wave action and prevent continued shoreline erosion and erosion of the interior marsh. Fences were originally constructed and filled in 1998 and maintenance was performed in 1998, 1999, 2001and 2003.
PCWRP		Prien Lake	SP	N/A	N/A	Theunissen	Flavin	Cal.	1	2001	N/A	N/A	N/A	N/A	$40,500	Approximately 700 feet of brush fence were built along the shoreline of Prien Lake, located just south of Lake Charles, to re-establish the original shoreline. Fences were originally constructed and filled in 2001and maintenance was performed in 2003 and 2004.
Vegetation		Grand Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	12	1986, 1987, 2001	N/A	N/A	N/A	N/A	$7,468	A total of 2,520 smooth cordgrass (*Spartina alterniflora*) plants and 5,000 giant cutgrass (*Zizaniopsis miliacea*) plants were used to create a stand of emergent vegetation that will protect the shoreline from erosion and trap available sediment.
Vegetation		Brown Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	154	1987, 1989, 1992, 1995	N/A	N/A	N/A	N/A	$9,100	A total of 37,000 smooth cordgrass (*Spartina alterniflora*) plants and 1,400 seashore paspalum (*Paspalum vaginatum*) plants were used to vegetate a marsh creation project area that utilized spoil disposal.

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Vegetation		Rollover Bayou	VP	N/A	N/A	Theunissen	Frith	Ver.	23	1998	N/A	N/A	N/A	N/A	$4,408	A total of 2,060 smooth cordgrass (*Spartina alterniflora*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced erosion and trap available sediment.
Vegetation		Sabine NWR	VP	N/A	N/A	Theunissen	Flavin	Cam.	69	1988	N/A	N/A	N/A	N/A	$39,076	A total of 15,000 smooth cordgrass (*Spartina alterniflora*) plants were used within the Sabine National Wildlife Refuge to provide a barrier against erosion.
Vegetation		Mallard Bay	VP	N/A	N/A	Theunissen	Flavin	Cam.	10	1988, 1989	N/A	N/A	N/A	N/A	$5,387	A total of 1,600 giant cutgrass (*Zizaniopsis miliacea*) plants and 250 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced erosion and trap available sediment.
Vegetation		Black Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	36	1988, 1992	N/A	N/A	N/A	N/A	$32,500	A total of 13,000 smooth cordgrass (*Spartina alterniflora*) plants were used to create a stand of emergent vegetation. This will provide a living barrier against wave-induced erosion and trap available sediment.
Vegetation		Lacassine	VP	N/A	N/A	Theunissen	Flavin	Cam.	14	1989, 1990	N/A	N/A	N/A	N/A	$22,200	A total of 1,500 giant cutgrass (*Zizaniopsis miliacea*) plants and 10,000 baldcypress (*Taxodium distichum*) trees were used to protect an island in Lacassine National Wildlife Refuge, located northwest of Grand Lake and adjacent to the GIWW.
Vegetation		Sabine Terraces	VP	N/A	N/A	Theunissen	Flavin	Cam.	48	1990	N/A	N/A	N/A	N/A	$58,760	A total of 20,800 smooth cordgrass (*Spartina alterniflora*) plants were used on 128 earthen terraces in order to stabilize the earthen terraces and create new marsh.
Vegetation		Blind Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	5	1990	N/A	N/A	N/A	N/A	$2,400	A total of 400 giant cutgrass (*Zizaniopsis miliacea*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced erosion and trap available sediment.
Vegetation		Mud Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	322	1991, 1992, 1994, 1996	N/A	N/A	N/A	N/A	$225,906	A total of 47,400 smooth cordgrass (*Spartina alterniflora*) plants were used in order to re-establish stands of emergent vegetation in the interior marshes, where erosion has negatively affected marsh expanse.
Vegetation		Fina Mud Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	58	1991, 1992	N/A	N/A	N/A	N/A	$99,088	A total of 24,000 single-stemmed plants and 386 one-gallon plugs of smooth cordgrass (*Spartina alterniflora*) were planted to stabilize the base of a levee.
Vegetation		Sweet Lake Hyacinth Fence	VP	N/A	N/A	Theunissen	Flavin	Cam.	5	1991	N/A	N/A	N/A	N/A	$11,340	A total of 2,000 feet of fence was constructed to prevent water hyacinth (*Eichhornia crassipes*) from encroaching onto the adjacent bank.
Vegetation		Brannon Ditch	VP	N/A	N/A	Mount	Johns	Cal.	11	1991	N/A	N/A	N/A	N/A	$12,543	A total of 4,200 smooth cordgrass (*Spartina alterniflora*) plants and 100 roseau cane (*Phragmites australis*) plants were used in an area of sediment that accreted behind the state-funded shoreline protection project (Brannon Ditch) to create a stand of emergent vegetation. This vegetation will provide a living barrier against wave-induced erosion and trap available sediment.
Vegetation		White Lake	VP	N/A	N/A	Theunissen	Frith	Ver.	8	1991, 1993	N/A	N/A	N/A	N/A	$5,156	A total of 1,825 giant cutgrass (*Zizaniopsis miliacea*) plants were used to provide a vegetation buffer against wave-induced erosion.

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Vegetation		McIlheny Oxbow	VP	N/A	N/A	Romero	Hebert	Cam.	8	1992	N/A	N/A	N/A	N/A	$6,820	A total of 1,705 single-stemmed plants of smooth cordgrass (*Spartina alterniflora*) was planted to stabilized cutbanks on both sides of the Oxbow.
Vegetation		Newman's Black Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	24	1992	N/A	N/A	N/A	N/A	$42,000	A total of 10,500 single-stemmed plants of smooth cordgrass (*Spartina alterniflora*) were planted to stabilize the base of a levee.
Vegetation		Pecan Island	VP	N/A	N/A	Boasso	Wooton	Ver.	29	1992, 1996	N/A	N/A	N/A	N/A	$17,470	A total of 4,000 seashore paspalum (*Paspalum vaginatum*) plants and 910 California bulrush (*Schoenoplectus californicus*) plants were used in order to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Cameron Creole	VP	N/A	N/A	Theunissen	Flavin	Cam.	28	1992, 2001	N/A	N/A	N/A	N/A	$36,716	A total of 12,000 smooth cordgrass (*Spartina alterniflora*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Walker GIWW	VP	N/A	N/A	Mount	Johns	Cal.	9	1992	N/A	N/A	N/A	N/A	$5,424	A total of 800 smooth cordgrass (*Spartina alterniflora*) plants were used to provide a vegetation buffer against wave-induced erosion.
Vegetation		Doland Lease	VP	N/A	N/A	Theunissen	Flavin	Cam.	4	1992	N/A	N/A	N/A	N/A	$3,771	A total of 1,195 California bulrush (*Schoenoplectus californicus*) plants were used in order to create a stand of emergent vegetation that will provide a living barrier against wave-induced erosion and trap available sediment.
Vegetation		Little Pecan Bayou	VP	N/A	N/A	Theunissen	Flavin	Cam.	23	1994	N/A	N/A	N/A	N/A	$13,560	A total of 2,000 smooth cordgrass (*Spartina alterniflora*) plants were used to re-establish stands of emergent vegetation in the interior marsh, where erosion has negatively affected marsh expanse.
Vegetation		Shell Western	VP	N/A	N/A	Theunissen	Flavin	Cam.	23	1994	N/A	N/A	N/A	N/A	$13,831	A total of 2,040 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Tebo Point	VP	N/A	N/A	Theunissen	Flavin	Cam.	33	1994, 1995, 1997	N/A	N/A	N/A	N/A	$18,577	A total of 2,740 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Boudreaux Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	23	1994	N/A	N/A	N/A	N/A	$13,560	A total of 2,000 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Sweet Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	18	1995, 1997	N/A	N/A	N/A	N/A	$9,899	A total of 2,460 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Brown Lake Marsh	VP	N/A	N/A	Theunissen	Flavin	Cam.	64	1995	N/A	N/A	N/A	N/A	$22,400	A total of 1,400 trade gallon containers of seashore paspalum (*Paspalum vaginatum*) and seashore saltgrass (*Distichlis spicata*) were planted on a marsh creation area.

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Vegetation		North Grand Lake Marsh	VP	N/A	N/A	Theunissen	Flavin	Cam.	12	1995	N/A	N/A	N/A	N/A	$8,160	Approximately 1,020 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to protect the shoreline from erosion and trap available sediment.
Vegetation		Brannon Ditch Fence (Phase II)	VP	N/A	N/A	Mount	Johns	Cal.	1	1995	N/A	N/A	N/A	N/A	$1,132	Approximately 200 feet of an existing 2,000 foot sediment fence were repaired to provide a barrier against wave-induced shoreline erosion.
Vegetation		Vermilion Corp #1 and #2	VP	N/A	N/A	Theunissen	Frith	Ver.	24	1995	N/A	N/A	N/A	N/A	$7,160	A total of 1,056 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		ARCO Road Marsh	VP	N/A	N/A	Theunissen	Flavin	Cam.	8	1995	N/A	N/A	N/A	N/A	$3,675	A total of 542 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Black Bayou Marsh	VP	N/A	N/A	Theunissen	Flavin	Cam.	47	1995, 1997	N/A	N/A	N/A	N/A	$26,713	A total of 1,940 California bulrush (*Schoenoplectus californicus*) plants and 2,000 smooth cordgrass (*Spartina alterniflora*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Grosse Savanne Marsh	VP	N/A	N/A	Theunissen	Flavin	Cam.	202	1995, 1997, 1998, 1999, 2000, 2001	N/A	N/A	N/A	N/A	$130,825	A total of 16,755 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Sabine GIWW	VP	N/A	N/A	Mount	Johns	Cam. Cal.	10	1995	N/A	N/A	N/A	N/A	$6,102	A total of 900 smooth cordgrass (*Spartina alterniflora*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Savanne Neuvelle Marsh	VP	N/A	N/A	Theunissen	Flavin	Cam.	7	1995	N/A	N/A	N/A	N/A	$3,390	A total of 500 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Umbrella Bay	VP	N/A	N/A	Theunissen	Flavin	Cam.	37	1995, 1998	N/A	N/A	N/A	N/A	$20,787	A total of 3,066 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		West Gum Cove Marsh	VP	N/A	N/A	Theunissen	Flavin	Cal. Cam.	11	1995	N/A	N/A	N/A	N/A	$5,424	A total of 800 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		West Hackberry Marsh	VP	N/A	N/A	Theunissen	Flavin	Cam.	10	1995	N/A	N/A	N/A	N/A	$5,085	A total of 750 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Webb Gully	VP	N/A	N/A	Mount	Johns	Cal.	11	1995	N/A	N/A	N/A	N/A	$5,560	A total of 820 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.

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Vegetation		Welfare Bridge Marsh	VP	N/A	N/A	Theunissen	Flavin	Cam.	11	1995	N/A	N/A	N/A	N/A	$5,424	A total of 800 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Goose Lake	VP	N/A	N/A	Mount	Johns	Cal.	22	1997	N/A	N/A	N/A	N/A	$12,679	A total of 1,120 smooth cordgrass (*Spartina alterniflora*) plants and 750 California bulrush (*Schoenoplectus californicus*) plants were used to protect the levee of the GIWW from eroding further, to slow water movement in the interior marsh, and to prevent the loss of marsh sediment.
Vegetation		Collicon Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	95	1997, 1999	N/A	N/A	N/A	N/A	$56,206	A total of 8,290 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Platform #1	VP	N/A	N/A	Theunissen	Frith	Ver.	25	1997	N/A	N/A	N/A	N/A	$14,916	A total of 2,200 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Black Bayou Cutoff	VP	N/A	N/A	Theunissen	Flavin	Cal. Cam.	13	1997	N/A	N/A	N/A	N/A	$7,797	A total of 1,150 smooth cordgrass (*Spartina alterniflora*) plants were used to revegetate the old banks of the bayou. This re-vegetation process will provide a natural passive hydrologic baffle that will slow tidal exchange and provide a seed source for natural revegetation of emergent vegetation.
Vegetation		West Alkali Ditch	VP	N/A	N/A	Mount	Johns	Cal.	32	1997, 1999	N/A	N/A	N/A	N/A	$18,984	A total of 2,800 smooth cordgrass (*Spartina alterniflora*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Marseillaise Bayou Marsh	VP	N/A	N/A	Theunissen	Flavin	Cam.	50	1997, 1998	N/A	N/A	N/A	N/A	$29,290	A total of 4,320 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and to re-establish areas of emergent vegetation in a large area of open, shallow water.
Vegetation		Platform #2	VP	N/A	N/A	Theunissen	Frith	Ver.	21	1998	N/A	N/A	N/A	N/A	$12,204	A total of 1,800 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation that will reduce wave energy in a large open area of eroded marsh.
Vegetation		North Grand Lake #2	VP	N/A	N/A	Theunissen	Flavin	Cam.	17	1998	N/A	N/A	N/A	N/A	$12,000	Approximately 1,500 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to provide a living barrier against wave- induced shoreline erosion and trap available suspended sediment.
Vegetation		Vermilion Corp #3	VP	N/A	N/A	Theunissen	Frith	Ver.	2	1998	N/A	N/A	N/A	N/A	$1,356	A total of 200 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation that will reduce the erosion along the backside of a protection levee that is preventing high salinities from entering a freshwater marsh.
Vegetation		Prien Lake Marsh	VP	N/A	N/A	Theunissen	Flavin	Cal.	14	1998	N/A	N/A	N/A	N/A	$8,136	A total of 1,200 smooth cordgrass (*Spartina alterniflora*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and to re-establish areas of emergent vegetation in a large area of open, shallow water.
Vegetation		West Turner's Bay Shoreline	VP	N/A	N/A	Mount	Johns	Cal.	14	1999	N/A	N/A	N/A	N/A	$9,600	Approximately 1,200 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to provide a living barrier against wave- induced shoreline erosion and trap available suspended sediment.

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Vegetation		Cotton Well Road	VP	N/A	N/A	Theunissen	Flavin	Cam.	25	1999	N/A	N/A	N/A	N/A	$14,916	A total of 2,200 smooth cordgrass (*Spartina alterniflora*) plants were used to provide a living fence that will reduce fetch, reduce water movement, and provide a sediment source in order to accelerate the revegetation of this eroded marsh.
Vegetation		Turner's Bay	VP	N/A	N/A	Mount	Johns	Cal.	14	1999	N/A	N/A	N/A	N/A	$8,136	A total of 1,200 smooth cordgrass (*Spartina alterniflora*) plants were used to provide a living barrier against wave-induced shoreline erosion and to trap available sediment.
Vegetation		Kelso Bayou	VP	N/A	N/A	Theunissen	Flavin	Cam.	3	1999	N/A	N/A	N/A	N/A	$2,034	A total of 300 smooth cordgrass (*Spartina alterniflora*) plants were used to provide a living barrier against wave-induced shoreline erosion and to trap available sediment.
Vegetation		Deepwater Cutgrass Demonstration	VP	N/A	N/A	Theunissen	Flavin	Cam.	14	2000	N/A	N/A	N/A	N/A	$8,136	A total of 1,200 giant cutgrass (*Zizaniopsis miliacea*) plants were used to determine if cutgrass can successfully be planted in open and deep (18-24 inches) waters, to create emergent vegetation, and to create a living barrier against wind and wave erosion.
Vegetation		Lacassine Bayou	VP	N/A	N/A	Theunissen	Flavin	Cam.	11	2000	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to re-establish the shoreline of the GIWW and Bayou Lacassine.
Vegetation		I-10/Sabine River Bridge Marsh	VP	N/A	N/A	Johns	Mount	Cal.	41	2000	N/A	N/A	N/A	N/A	$24,000	Approximately 3,000 trade gallons of California bulrush (*Schoenoplectus californicus*) were planted to provide a natural living barrier of emergent vegetation to protect the shoreline from erosion.
Vegetation		Mermentau River	VP	N/A	N/A	Theunissen	Flavin	Cam.	27	2000	N/A	N/A	N/A	N/A	$15,730	A total of 2,320 smooth cordgrass (*Spartina alterniflora*) plants were used to protect and slow erosion of newly rebuilt and critically eroding sections of levee.
Vegetation		Christmas Tree Fence Demonstration	VP	N/A	N/A	Theunissen	Flavin	Cam.	2	2000	N/A	N/A	N/A	N/A	$1,243	A total of 300 roseau cane (*Phragmites australis*) plants were used to establish living vegetation within a section of brush fence. This vegetation would assist in sediment trapping, and serve as a wind break. If successful, this would eliminate the need for yearly maintenance.
Vegetation		California Bulrush Sonde Demonstration	VP	N/A	N/A	Theunissen	Flavin	Cam.	12	2000	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 California bulrush (*Schoenoplectus californicus*) plants were used to monitor the effects of variations in salinity and flood duration on growth and vigor in plants.
Vegetation		GIWW Cutgrass Demonstration	VP	N/A	N/A	Theunissen	Flavin	Cam.	9	2000	N/A	N/A	N/A	N/A	$5,424	A total of 800 giant cutgrass (*Zizaniopsis miliacea*) plants were used to determine the suitability of planting giant cutgrass in various soil types, and to establish emergent vegetation in an actively eroding area. This will aid in wave reduction and sediment trapping.
Vegetation		West Perry Ridge	VP	N/A	N/A	Mount	Johns	Cal.	34	2000	N/A	N/A	N/A	N/A	$20,340	A total of 3,000 California bulrush (*Schoenoplectus californicus*) plants were used to provide a seed source for natural regeneration of emergent vegetation and to provide a natural, living barrier of emergent vegetation. This will protect against wind fetch and aid in decreasing water turbidity.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Vegetation		Gum Cove Ferry GIWW	VP	N/A	N/A	Mount	Johns	Cal.	12	2000	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 smooth cordgrass (*Spartina alterniflora*) plants were used to provide a natural living barrier against wave-induced shoreline erosion on the south bank of the GIWW.
Vegetation		Smooth Cordgrass Maintenance Demonstration	VP	N/A	N/A	Theunissen	Flavin	Cam.	N/A	2001	N/A	N/A	N/A	N/A	$1,539	This project, located just east of Black Bayou, was initiated to determine the effectiveness of fertilizing smooth cordgrass (*Spartina alterniflora*) on constricted terraces which are not exhibiting vigorous growth. Approximately 30,750 feet of terraces were fertilized with three different fertilization regimes.
Vegetation		Jim Erbelding Beach	VP	N/A	N/A	Mount	Flavin	Cam.	4	2001	N/A	N/A	N/A	N/A	$2,089	A total of 350 stems of bitter panicum (*Panicum amarum*) were planted to stabilize dunes located on the east side of Jim Erbelding Road. This project was designed to test the effectiveness of trapping and accumulating sand with the sole use of vegetation.
Vegetation		Superior Canal/Grand Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	11	2001	N/A	N/A	N/A	N/A	$7,479	A total of 1,000 giant cutgrass (*Zizaniopsis miliacea*) plants were placed to decrease shoreline erosion along Grand Lake shoreline, near the Superior Canal
Vegetation		California Bulrush Sonde Demonstration 2	VP	N/A	N/A	Theunissen	Flavin	Cam.	7	2001	N/A	N/A	N/A	N/A	$5,751	A total of 660 California bulrush (*Schoenoplectus californicus*) plants were placed near the Highway 384 (CS-21) project area to determine the tolerance of bulrush in high salinity marshes.
Vegetation		M.O. Miller	VP	N/A	N/A	Theunissen	Flavin	Cam.	46	2001	N/A	N/A	N/A	N/A	$21,266	A total of 4,000 smooth cordgrass (*Spartina alterniflora*) plants were placed just south of Grand Chenier along existing infrastructure such as roads, levees, and canals. This project was constructed to reduce shoreline erosion, trap available sediment, and provide additional habitat for both fish and wildlife.
Vegetation		Choupique Bayou	VP	N/A	N/A	Mount	Johns	Cam.	2	2001	N/A	N/A	N/A	N/A	$1,277	A total of 150 smooth cordgrass (*Spartina alterniflora*) plants were placed along Bayou Choupique to reduce bank erosion, trap available sediment, provide wildlife and fisheries habitat, and to provide a seed source for natural regeneration in an area with little vegetation.
Vegetation		DU Terrace Demo	VP	N/A	N/A	Theunissen	Flavin	Cam.	107	2002	N/A	N/A	N/A	N/A	$70,000	A total of 5,500 smooth cordgrass (*Spartina alterniflora*) plugs and a total of 6,000 smooth cordgrass trade gallon containers were placed on newly built dragline terraces. The effectiveness of trade gallon containers on 5 foot spacing versus bare root plugs on 3 foot spacing will be compared. Which form of fertilizer application, if any, is effective in increasing growth rate of smooth cordgrass will be also determined; a total of 46,500 linear feet were planted.
Vegetation		Grosse Savanne Mar. #7	VP	N/A	N/A	Theunissen	Flavin	Cam.	11	2002	N/A	N/A	N/A	N/A	$8,000	A large open water area of eroded marsh was planted with 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) to create stands of emergent vegetation that will provide a living barrier against wave action, help improve water clarity, establish areas of emergent vegetation in a large area of open, shallow water, and provide a seed source for natural regeneration of emergent vegetation; 5,000 linear feet were planted.
Vegetation		Trident Dock	VP	N/A	N/A	Theunissen	Flavin	Cam.	6	2002	N/A	N/A	N/A	N/A	$4,400	A total of 550 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted in an extremely high-wave-energy area to demonstrate their ability to withstand extremely strong wave energies, to establish emergent vegetation in an actively eroding area, to aid in wave reduction and sediment trapping, and to provide wildlife and fisheries habitat; 2,750 linear feet were planted.

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Vegetation		GIWW - Pontoon Bridge	VP	N/A	N/A	Theunissen	Smith	Cam.	11	2001, 2002	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted in deeper-water areas (1.5 - 2 feet) with loamy soils. This was done to determine the suitability of planting giant cutgrass in deeper water areas with loamy soils and significant wave energy. Other objectives are to establish emergent vegetation in an actively eroding area, to aid in wave reduction and sediment trapping, and to provide wildlife and fisheries habitat; 5,000 linear feet were planted.
Vegetation		DU Terrace Planting Demo	VP	N/A	N/A	Theunissen	Flavin	Cam.	106	2002	N/A	N/A	N/A	N/A	$70,000	A total of 5,000 plugs and 6,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to compare the effectiveness of trade gallon containers and bare root plugs in colonizing terraces.
Vegetation		Briggs Marsh	VP	N/A	N/A	Theunissen	Flavin	Cam.	11	2002	N/A	N/A	N/A	N/A	$8,000	Approximately 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to provide a living barrier against wave action and improve water clarity.
Vegetation		DU Terrace Top Demo	VP	N/A	N/A	Theunissen	Flavin	Cam.	25	2002	N/A	N/A	N/A	N/A	$13,104	A total of 2,184 four inch pots of marshhay cordgrass (*Spartina patens*), saltgrass (*Distichlis spicata*), needlegrass (*Spartina spartinae*), and bitter panicum (*Panicum amarum*) were planted to determine which species was the most effective in colonizing newly constructed terraces.
Vegetation		Lacassine A-Jacks	VP	N/A	N/A	Theunissen	Flavin	Cam.	18	2002	N/A	N/A	N/A	N/A	$12,200	Approximately 1,525 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to examine the effectiveness of giant cutgrass as a vegetative barrier.
Vegetation		Calcasieu Ship Channel SW	VP	N/A	N/A	Theunissen	Flavin	Cam.	23	2003	N/A	N/A	N/A	N/A	$16,000	Approximately 2,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted in the Calcasieu Ship Channel to demonstrate the ability of the vegetation to stabilize shorelines in extremely high wave energy sites. In addition comparisons concerning the effectiveness of single versus double row plantings will be observed.
Vegetation		Christmas Tree Fence Demo #2	VP	N/A	N/A	Theunissen	Flavin	Cam.	2	2003	N/A	N/A	N/A	N/A	$1,000	A total of 100 trade gallon containers of roseau cane (*Phragmites australis*) were planted in brush fences to serve as a wind break and assist in sediment trapping. If successful this project would eliminate the need for yearly refilling with Christmas trees.
Vegetation		Marseillaise Bayou Marsh #3	VP	N/A	N/A	Theunissen	Flavin	Cam.	23	2003	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted on the north end of Little Chenier Road to create a stand of emergent vegetation that will provide a living barrier against wave erosion.
Vegetation		Sabine Lake Shoreline	VP	N/A	N/A	Theunissen	Flavin	Cam.	17	2003	N/A	N/A	N/A	N/A	$4,000	Approximately 500 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted on the Sabine Lake shoreline to prevent shoreline erosion and introduce seed for natural regeneration.
Vegetation		Catfish Lake	VP	N/A	N/A	Theunissen	Flavin	Cam.	23	2003	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 units of California bulrush (*Schoenoplectus californicus*) were planted to create a stand of emergent vegetation that will act as a wave break to protect the shoreline and trap available sediments.
Vegetation		South Fork Black Bayou	VP	N/A	N/A	Theunissen	Flavin	Cam.	5	2003	N/A	N/A	N/A	N/A	$3,200	A total of 200 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and 200 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to slow erosion on the shoreline of the GIWW and to slow the water exchange in small adjacent ponds.

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Vegetation		Grand Chenier Highway	VP	N/A	N/A	Theunissen	Flavin	Cam.	11	2003	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted south of Hwy. 82 to protect the remaining infrastructure and establish a seed source for natural regeneration.
Vegetation		Moss Lake	VP	N/A	N/A	Mount	Johns	Cal.	3	2003	N/A	N/A	N/A	N/A	$2,400	A total of 300 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted on the southwest bank of Moss Lake to slow erosion in a rapidly deteriorating marsh.
Vegetation		Lacassine GIWW	VP	N/A	N/A	Theunissen	Flavin	Cam.	11	2003	N/A	N/A	N/A	N/A	$8,000	Approximately 500 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) and giant cutgrass (*Zizaniopsis miliacea*) were planted to determine the effectiveness of the two species to reduce erosion in low salinity areas.
Vegetation		M.O. Miller 2-Mycorrhizal Fungi Demo	VP	N/A	N/A	Theunissen	Flavin	Cam.	69	2003	N/A	N/A	N/A	N/A	$42,664	A total of 2,000 trade gallon containers and 6,666 plugs of smooth cordgrass (*Spartina alterniflora*) will be planted along a levee in Grand Chenier. The project results will be used to evaluate the effectiveness of fertilizers and mycorrhizal fungi in certain environments.
Vegetation		Mud Lake Peninsula	VP	N/A	N/A	Theunissen	Erdey	Cam.	27	2002	N/A	N/A	N/A	N/A	$9,360	This demonstration project involved the planting of 780 plugs of smooth cordgrass (*Spartina alterniflora*), 780 plugs of marshhay cordgrass (*Spartina patens*), and 780 plugs of salt grass (*Distichlis spicata*) in a dead area of marsh to determine which species would be best able to revegetate this marsh. The ultimate purpose is to re-establish vegetation in areas that are completely bare of any vegetation; a total of 11,700 linear feet were planted.
Vegetation		Apache Terrace Tops	VP	N/A	N/A	Theunissen	Flavin	Cam.	18	2004	N/A	N/A	N/A	N/A	$9,600	Approximately 800 four inch pots of marshhay cordgrass (*Spartina patens*) and 800 four inch pots of saltgrass (*Distichlis spicata*) were planted to vegetate the tops of terraces.
Vegetation		Beach Reclamation	VP	N/A	N/A	Theunissen	Flavin	Cam.	12	2004	N/A	N/A	N/A	N/A	$6,228	Approximately 1,000 four-inch pots of bitter panicum (*Panicum amarum*) and 38 four inch pots of seashore paspalum (*Paspalum vaginatum*) were planted to establish native vegetation on a newly deposited sand beach.
Vegetation		DU Terraces - Hackberry	VP	N/A	N/A	Theunissen	Flavin	Cam.	28	2004	N/A	N/A	N/A	N/A	$16,000	A total of 4,000 plugs of smooth cordgrass (*Spartina alterniflora*) were planted on existing terraces to control erosion.
Vegetation		Highway 384/GIWW	VP	N/A	N/A	Theunissen	Flavin	Cam.	12	2004	N/A	N/A	N/A	N/A	$8,320	The objective of this project was to stop erosion on the banks of the GIWW and interior bayous through the plantings of 500 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*), 300 trade gallon containers of roseau cane (*Phragmites australis*) and 240 trade gallon containers of California bulrush (*Schoenoplectus californicus*).
Vegetation		Johnson Bayou Chenier Creation	VP	N/A	N/A	Theunissen	Flavin	Cam.	41	2004	N/A	N/A	N/A	N/A	$750	Approximately 500 live oak (*Quercus virginiana*), 500 hackberry (*Celtis laevigata*), 300 mulberry (*Morus rubra*), 100 toothache (*Zanthoxylum clava-herculis*), and 100 honey locust trees (*Gleditsia triacanthos*) were used to recreate a naturally occuring chenier ridge.
Vegetation		Rockefeller Terraces	VP	N/A	N/A	Theunissen	Flavin	Cam.	59	2004	N/A	N/A	N/A	N/A	$34,000	A total of 8,500 plugs of smooth cordgrass (*Spartina alterniflora*) were planted on terraces to control erosion and establish wildlife habitat.

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Vegetation		Smooth Cordgrass Maintenance Demonstration 2	VP	N/A	N/A	Theunissen	Flavin	Laf.	23	2004	N/A	N/A	N/A	N/A	$16,000	The project goal will be to look at the practicality of establishing vegetation on terraces where initial plantings were not successful. Approximately 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) and 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted on plowed terraces that are experiencing erosion.
Vegetation		Vinton Drainage Canal	VP	N/A	N/A	Mount	Johns	Cal.	11	2004	N/A	N/A	N/A	N/A	$8,000	A total of 500 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and 500 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to slow erosion on a levee near the Vinton Drainage Canal.
Section 204/1135		Brown Lake	DM MC	N/A	N/A	Theunissen	Flavin	Cam.	315	1999	N/A	N/A	N/A	N/A	$1,132,435	Approximately 1.6 million cubic yards of dredged material was pumped to create 315 acres of land at an elevation conducive to marsh creation in the Brown Lake area near the Calcasieu River, 16 miles south of Lake Charles, Louisiana.
Section 204/1135		Calcasieu River & Pass Phase I	DM MC	N/A	N/A	Theunissen	Flavin	Cam.	1,070	1992	N/A	N/A	N/A	N/A	$1,560,804	This Section 204 project provides for the disposal of dredged material removed from the area between mile 7.5 and 11.5 of the Calcasieu Ship Channel. A total of 4 million cubic yards of material were deposited in three phases within the Sabine National Wildlife refuge at an elevation conducive to marsh creation.
Section 204/1135		Calcasieu River & Pass Phase II	DM MC	N/A	N/A	Theunissen	Flavin	Cam.	1,070	1996	N/A	N/A	N/A	N/A	$1,560,804	This Section 204 project provides for the disposal of dredged material removed from the area between mile 7.5 and 11.5 of the Calcasieu Ship Channel. A total of 4 million cubic yards of material were deposited in three phases within the Sabine National Wildlife refuge at an elevation conducive to marsh creation.
Section 204/1135		Calcasieu River & Pass Phase III	DM MC	N/A	N/A	Theunissen	Flavin	Cam.	1,070	1999	N/A	N/A	N/A	N/A	$1,560,804	This Section 204 project provides for the disposal of dredged material removed from the area between mile 7.5 and 11.5 of the Calcasieu Ship Channel. A total of 4 million cubic yards of material were deposited in three phases within the Sabine National Wildlife refuge at an elevation conducive to marsh creation.

Program: Breaux Act=Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA); State=Restoration projects funded primarily by the State of Louisiana through the Coastal Restoration Division; PCWRP=Parish Coastal Wetlands Restoration Program (Christmas Tree Program); Vegetation=DNR/NRCS/SWCC Vegetation Planting Program; Section 204/1135= Water Resource Development Act Sections 204 and 1135 beneficial use of dredged material projects; WRDA=Water Resources Development Act; Dedicated Dredging Program= State project LA-01a and LA-01b .

Project Type: HR=Hydrologic Restoration; DM=Beneficial Use of Dredged Material; MM=Marsh Management; MC=Marsh Creation; SP=Shoreline Protection; FD=Freshwater Diversion; VP=Vegetation Planting; SNT=Sediment and Nutrient Trapping; OM=Outfall Management; BI=Barrier Island; SD=Sediment Diversion.

PPL: Priority Project List (as authorized each year by the Breaux Act Task Force).

Agency/Sponsor: EPA=Environmental Protection Agency; NMFS=National Marine Fisheries Service; NRCS=Natural Resources Conservation Service; NWRC=National Wetlands Research Center; USFWS=U.S. Fish and Wildlife Service; USACE=U.S. Army Corps of Engineers.

Parish: Asc.=Ascension, Asu.=Assumption, Cam.=Cameron, Ibe.=Iberia, Jef.=Jefferson, Laf.=Lafourche, Orl.=Orleans, Plaq.=Plaquemines, StB.=St. Bernard, StC.=St. Charles, StJo.=St. John the Baptist, StM.=St. Mary, StT.=St. Tammany, Tan.=Tangipahoa, Ter.=Terrebonne, Ver.=Vermilion.

Anticipated Acres Benefitted: N/A for Breaux Act demonstration and deauthorized projects.

Baseline Cost Estimates and Current Cost Estimates for Breaux Act projects are from the USACE. Costs for other restoration programs are from DNR's Contract and Budget Section. Baseline Cost and Current Cost Estimate both include contingency funds. Beginning with Breaux Act PPL 10, project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity.

N/A=Not Applicable.

Table 5. Coastwide restoration projects and programs.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefitted	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	LA-03a (CW-7)	Nutria Harvest for Wetland Restoration Demonstration	N/A	6	USFWS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$2,140,000	$2,140,000	This project will enable the Louisiana Department of Wildlife and Fisheries to establish an economic incentive program to trap and control nutria, which are contributing to coastal wetland loss, by promoting the consumption of nutria meat.
Breaux Act	LA-03b	Coastwide Nutria Control Program	N/A	11	NRCS	N/A	N/A	N/A	14,963	N/A	N/A	N/A	N/A	$12,945,696	$13,012,998	The goal of the project is to eliminate or significantly reduce damage to coastal wetlands resulting from nutria herbivory. The implementation of an incentive payment program, beginning with the 2002-2003 trapping season, will compensate licensed trappers $4 for each nutria tail delivered to a collection center. In 2003, a total of 308,160 nutria tails, worth over 1.2 million dollars in incentive payments, were collected from 342 participants.
Breaux Act	LA-05	Floating Marsh Creation Demonstration Project	N/A	12	NRCS	N/A	N/A	N/A	N/A	Pending	N/A	N/A	N/A	$1,080,891	$1,080,891	The goal of this project is to develop and test unique and previously untested technologies for creating floating marsh for potential use in fresh and intermediate zones. This project is a demo project that will be used to test the feasibility of buoyant vegetated mats/artificial islands to convert open water marsh areas and canals into fresh and intermediate marsh zones.
Other		Coastal Wetlands Public Outreach	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$400,000	The Public Information Office provides a variety of printed and video materials, fact sheets, website information, and a traveling Louisiana Wetlands exhibit. Other outreach efforts include attending conferences and workshops, civic events, and school activities and ongoing work with the Breaux Act Task Force Outreach Committee. As a result of working with several noted authors, writers and reporters, the Public Information Office has contributed to the publishing of more than 60 national articles in 2004. The most noteworthy article to date has been the National Geographic Magazine's October 2004 article entitled *Gone with the water*.
Other		NRCS Biomass Production Program	VP	N/A	NRCS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$80,000	$80,000	The NRCS-LDNR/CRD Biomass Program is a multiyear programmatic initiative to accelerate the collection, testing, and release of important coastal wetland restoration plants. The Biomass Program began in 1999 in conjunction with the LDNR/CRD Small-Dredge Program with emphasis on plant performance and dedicated dredged sediment. This program is an important coastal restoration initiative that is advancing coastal wetland plant technology development and transfer.
Other		NWRC Biomass Production Program	VP	N/A	NWRC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$384,500	$1,007,600	This multi-year cooperative agreement will study productivity of endemic wetland plants, with the goal of identifying specific environmental conditions for maximum growth of a number of varieties (i.e., cultivars) within four plant species. The information obtained will facilitate matching plant species and varieties to expected environmental conditions at restoration sites, thereby increasing the likelihood of successful revegetation efforts.

Program: Breaux Act=Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA).

Project Type: VP=Vegetation Planting.

PPL: Priority Project List (as authorized each year by the Breaux Act Task Force).

Agency/Sponsor: NRCS=Natural Resources Conservation Service; NWRC=National Wetlands Research Center; USFWS=U.S. Fish and Wildlife Service.

Anticipated Acres Benefitted: N/A for Breaux Act demonstration and deauthorized projects.

Baseline Cost Estimates and Current Cost Estimates for Breaux Act projects are from the USACE. Costs for other restoration programs are from DNR's Contract and Budget Section. Baseline Cost and Current Cost Estimate both include contingency funds. Beginning with Breaux Act PPL 10, project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity.

N/A=Not Applicable

Table 6. Status of all authorized Breaux Act projects (as of November 2004).

	Status	Region 1	Region 2	Region 3	Region 4	Coastwide	Total
Breaux Act	*Constructed*	7	14	25	21	2	**69**
	Constructed and Deauthorized	0	0	0	2	0	**2**
	Deauthorized	4	8	4	1	0	**17**
	Engineering and Design Phase	7	21	20	10	1	**59**
	Total Authorized	**18**	**43**	**49**	**34**	**3**	**147**

Table 7. Summary of all constructed/implemented coastal restoration projects (as of November 2004).

Program		Region 1	Region 2	Region 3	Region 4	Coastwide	Total Constructed
Breaux Act*		7	14	25	23	2	**71**
Federal	*Section 204/1135*	5	3	2	4	0	**14**
	FEMA	1	0	8	0	0	**9**
	WRDA	0	2	0	0	0	**2**
	*Other***	1	2	1	0	2	**6**
State	*State*	6	9	12	8	0	**35**
	Dedicated Dredging Program	0	2	0	0	0	**2**
	Fontainebleau State Park Mitigation	1	0	0	0	0	**1**
	Coastal Wetlands Public Outreach	0	0	0	0	1	**1**
PCWRP		7	10	8	10	0	**35**
Vegetation		29	72	95	95	0	**291**
Total Constructed		**57**	**114**	**151**	**140**	**5**	**467**

* The total of 71 constructed Breaux Act projects includes 69 constructed projects and 2 constructed and deauthorized projects.

** Other Federal projects include the Lake Pontchartrain Mitigation Project, Fifi Island Restoration Project, Fisheries Habitat Restoration on West Grand Terre Island, Brown Marsh Small Dredge Marsh Creation Project, and the NRCS and NWRC Biomass Production Programs.

Note: As of November 2004, a total of 543 restoration projects had been authorized. This total included 147 authorized Breaux Act projects and all constructed Federal, State, PCWRP, and Vegetation projects.

Table 8. Inactive state projects for which no funding exists.

Project Number	Project Name	Parish
BA-03-b	Naomi (LaReussite) Diversion Enlargement of Capacity	Jefferson/ Plaquemines
BA-04-b	West Pointe a la Hache Diversion Enlargement	Plaquemines
BA-06	U.S. Highway 90 to GIWW Wetland Outfall Management	Plaquemines
BA-07	Couba Island-Restore Canal Closure	St. Charles
BA-08	Lake Cataouatche Shore Protection	St. Charles
BA-09	Salvador WMA Gulf Canal Project	St. Charles
BA-11/12	Tiger/Red Pass Diversion and Outfall Management and Grand/Spanish Pass Diversion	Plaquemines
BA-13	Hero Canal Diversion	Plaquemines
BA-14	Little Lake Marsh Management	Jefferson
BA-17-a	City Price Diversion - Home Place	Plaquemines
BA-17-b	City Price Diversion - Happy Jack	Plaquemines
BS-01-a	Bohemia Diversion Structure - Operation of Existing Structure	Plaquemines
BS-01-b	Bohemia Diversion Structure Outfall Management	Plaquemines
BS-04-b	White's Ditch Diversion Siphon Enlargement	Plaquemines
BS-05	Bayou LaMoque Diversion Outfall Management	Plaquemines
CS-04-b	Cameron-Creole Watershed Freshwater Introduction from GIWW	Cameron
CS-05-a	Sabine Freshwater Introduction	Cameron
CS-06	Black Lake South Shore Protection	Cameron
CS-07	Black Lake West Shore Protection	Cameron
CS-08	Black Lake North Marsh Management	Cameron
CS-10	Grand Lake Ridge Marsh Management	Cameron
CS-11-a	Sweet Lake/GIWW Bank Restoration (Phase 1)	Cameron
CS-12	Black Bayou Ridge Freshwater Introduction	Cameron
CS-13	Back Ridge Freshwater Introduction	Cameron
CS-14	Tripod Bayou Control Structure	Cameron
CS-15	Boudreaux/Broussard Marsh Protection	Cameron
CS-16	Black Bayou Culverts	Cameron
ME-02	Hog Bayou Wetland Restoration and Enhancement	Cameron
ME-05	White Lake Shore Protection	Vermilion
ME-06	Big Burn Marsh Management	Cameron
ME-07	Deep Lake Marsh Protection	Vermilion
ME-10	Sawmill Canal Water Management (PD)	Cameron
MR-02	Pass a Loutre Sediment Fencing	Plaquemines
MR-04	Tiger Pass Wetland Creation(PD)	Plaquemines
MR-05	Pass a Loutre Sediment Mining (PD)	Plaquemines
PO-01-b	Violet Siphon Diversion Enlargement	St. Bernard
PO-01-c	Violet Siphon Diversion Outfall Management	St. Bernard
PO-02-b	Alligator Point Shore Protection	Orleans
PO-03-a	LaBranche Wetland Complete Management Plan	St. Charles
PO-04	Bonnet Carre´ Freshwater Diversion	St. Charles
PO-05-a	SE Lake Maurepas Wetland - Reduce Ponding of Water	St. John
PO-05-b	SE Lake Maurepas Wetland - Small Diversion of Miss. River Water	St. John

Continued

Table 8. Continued.

Project Number	Project Name	Parish
PO-07	North Shore Wetland Marsh Restoration	St. Tammany
PO-11	Cutoff Bayou Marsh Management	Orleans
PO-12	West LaBranche Wetland Management	St. Charles
PO-13	Tangipahoa/Pontchartrain Shore Protection	Tangipahoa
PO-14	Green Point/Goose Point Marsh Restoration	St. Tammany
PO-15	Alligator Point Marsh Restoration	Orleans
TE-05-a	Grand Bayou Wetland Protection and Enhancement	Terrebonne
TE-08	Bayou Pelton Wetland Protection	Terrebonne
TE-09	Bully Camp Marsh Management	Lafourche
TE-11	Isles Dernieres Cut Closure	Terrebonne
TE-12	Bird Island Restoration	Terrebonne
TE-13	Trinity Bayou Pilot Project	Terrebonne
TE-16	St. Louis Wetland Restoration	Terrebonne
TE-21	Falgout Canal South Wetland Creation (PD)	Terrebonne
TV-01-b	Shark Island/Weeks Bay Protection	Iberia
TV-05-1	Marsh Island Canal Backfilling - Increment 1	Iberia
TV-07	Marsh Island Sediment Fencing - Restoration	Iberia
TV-08	Redfish Point Shore Protection	Vermilion
TV-10	Weeks Bay Shore Restoration	Iberia

CONCLUSIONS

Since 1989, the Coastal Restoration and Coastal Engineering Divisions and its partners have been engaged in an effort to restore, preserve, and enhance Louisiana's coastal wetlands, which are disappearing at a rate of 24 square miles per year. To date, 543 restoration projects have been authorized throughout the coastal zone to ameliorate the state's wetland loss. As of November 2004, the coastal restoration program has fully implemented 71 Breaux Act projects, 39 state projects, 31 federal projects, 291 vegetation projects, and 35 PCWRP projects. Despite these efforts, land loss remains a significant problem in Louisiana.

Restoration project types range from large freshwater diversion projects, which divert a portion of a river's flow, sediment, and nutrients, into entire basins, to small vegetation projects, which involve planting salt- and flood-tolerant marsh plants to stabilize eroding soils.

Among those projects already constructed, many have proven to be successful. Examples include beneficial use of dredged material and marsh creation projects, which have created vegetated marsh habitat in areas that previously contained deteriorated wetlands or open water. Sediment diversion projects have also been successful in creating marsh in the form of crevasse-splays in areas that were once shallow open water. Data collected from these projects are not only used to evaluate the effectiveness of individual restoration projects, but also to guide the planning and design of future projects.

The CRD/CED and its partners have worked tirelessly to determine the most efficient and productive manner to address Louisiana's catastrophic land loss problem. Recent cooperative initiatives like the Louisiana Coastal Area Ecosystem Restoration Plan and the Governor's Commission on Coastal Restoration and Conservation are aimed at improving the ability to design and implement effective coastal restoration projects. Also, the America's Wetland campaign will educate the nation and solicit national support for saving Louisiana's vanishing coast. Furthermore, technological advances have enabled the public and scientific professionals to acquire information and data on all restoration projects through the OCRM website. These most recent developments, and the continued dedication of scientists, engineers, landowners, and the public will ensure that Louisiana's coast will not disappear without a fight.

Knowledge is a powerful tool in the conservation of natural resources, not only for wetland scientists and project engineers, but also for concerned citizens. By remaining aware and informed of coastal problems and restoration efforts, individuals can help preserve Louisiana's wetlands.

Show your support by promoting wetland restoration efforts, working with non-governmental coastal organizations, attending local meetings, and conserving wetland resources by following fishing and hunting regulations. Help by participating in beach clean-ups, environmental education programs, and in LDNR's Christmas tree program either by donating your tree after the holiday season or by volunteering your time to repair and create Christmas tree fences. Through concern and participation, citizens can play a role in the success of wetland restoration programs and can personally contribute toward the goal of saving a national treasure.

Please visit our website at www.dnr.louisiana.gov/crm for more information regarding LDNR restoration projects, as well as environmental data from over 4,500 monitoring stations located throughout the Louisiana coast. For any other information or questions, call 1-888-459-6107, or write to the Louisiana Department of Natural Resources, Coastal Restoration Division, P.O. Box 44027, Capitol Station, Baton Rouge, Louisiana 70804-4027.

Louisiana Department of Natural Resources
1-888-459-6107

www.dnr.louisiana.gov/crm